



**THE EFFECT OF WORDS SEARCH STRATEGY ON THE STUDENTS'
ABILITY IN READING COMPREHENSION AT THE SECOND GRADE
STUDENTS OF MTs AL-JAM'İYATUL WASLIYAH TEMBUNG
IN ACADEMIC YEAR 2017/2018**

SKRIPSI

**Submitted to Faculty of Tarbiyah and Teachers' Training State Islamic
University North Sumatera Medan as a Partial Fulfillment of the
Requirements for the Degree of S-1 Program**

By:

AIDA SAPUTRI NST

34.14.3.021

**DEPARTMENT OF ENGLISH EDUCATION
FACULTY OF TARBIYAH AND TEACHERS' TRAINING
STATE ISLAMIC UNIVERSITY OF NORTH SUMATERA
MEDAN**

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Assalamualaikum Wr. Wb.

Setelah membaca, meneliti dan memberi saran-saran perbaikan seperlunya terhadap skripsi mahasiswa a.n. **Aida Saputri Nst** yang berjudul:

“THE EFFECT OF WORDS SEARCH STRATEGY ON STUDENTS’ ABILITY IN READING COMPREHENSION AT THE SECOND GRADE STUDENTS OF MTs AL-JAM’IYATUL WASLIYAH TEMBUNG IN ACADEMIC YEAR 2017/2018”,

maka kami berpendapat bahwa skripsi ini sudah dapat diterima untuk melengkapi syarat-syarat untuk mencapai gelar Sarjana Pendidikan (S.Pd.) pada Fakultas Ilmu Tarbiyah dan Keguruan UIN Sumatera Utara Medan.

Demikian kami sampaikan, atas perhatian Bapak kami ucapkan terima kasih. Wassalamualaikum Wr. Wb

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Menyatakan dengan sebenarnya bahwa skripsi yang saya serahkan ini benar-benar merupakan hasil karya sendiri, kecuali kutipan-kutipan dari ringkasan-ringkasan yang semuanya telah saya jelaskan sumbernya. Apabila di kemudian hari terbukti atau dapat dibuktikan skripsi ini hasil jiplakan, maka gelar ijazah yang diberikan oleh Universitas batal saya terima.

Medan, June 2018

Yang Membuat Pernyataan

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ABSTRACT

AIDA SAPUTRI NST, NIM.34143021, THE EFFECT OF WORDS SEARCH STRATEGY ON THE STUDENTS' ABILITY IN READING COMPREHENSION AT THE SECOND GRADE STUDENTS OF MTs AL-JAM'İYATUL WASLIYAH TEMBUNG IN ACADEMIC YEAR 2017/2018.

Skripsi, Medan: Department of English Education, Faculty of Tarbiyah and Teachers' Training, State Islamic University of North Sumatera, Medan 2018.

Keywords: Words Search Strategy, Students' Ability in Reading Comprehension

This research was intended to find out the empirical evidence of the students' ability in reading comprehension by using words search strategy at the second grade students of MTs Al-Jam'iyatul Wasliyah Tembung. This research was experimental research. The population of this research was all students of class VIII of MTs Al-Jam'iyatul Wasliyah Tembung. The samples of this research were taken from 40 students of experimental group (class VIII-5) and 40 students of control group (class VIII-3). The instrument for collecting data were test and observation. After analyzing the data, the writer got; The value of $t_{observed}$ was 2.21 and that of t_{table} was 1.994. So the value of $t_{observed}$ was higher than that of t_{table} . It means that there was significant effect of using Words Search Strategy on students' ability in reading comprehension.

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CHAPTER I

INTRODUCTION

A. Background of the Study

Reading as one of the four language skills take much portion of time in teaching and learning process in the class. In improving reading skills, the students have to realize that the aim of reading the text is to comprehend reading test and to get information. Reading as an important role in language learning and it would be better that is teaching wisely done.

Grabe and Stoller state that reading is an ability to draw meaning from the printed page and interpreted the information appropriately.¹ From the quotation above, reading means that to find out the messenger or information that the writer put into the text as efficient as possible.

In the classroom practice, the reason of reading is reading for information. In order to get the information, students need to comprehend what they have read. Comprehension means an understanding of the information that words and sentences are communicating in a reading text. So Reading comprehension is one of essential materials of teaching English that is given for students.

Reading comprehension is a good way to develop and understand English. In reading comprehension, students should be able to read English text effectively and efficiently. In reading comprehension, the students do not read the text only, but they want to know about the content of the text. To become a good reader, students should have a particular purpose before they interact with the text.

¹ William Grabe and Fredricka L.Stoller, *Teaching and Researching Reading*. Great Britain : Pearson education, 2002, p. 9.

In reading comprehension, students are expected to have knowledge and ability to understand about the content that has explained in the text. It means the students need to learn a considerable amount of information of a text. Therefore, students need some abilities to understand and remember main ideas as well as number of details that elaborate the main and supporting ideas in the text. They also need to link the text to their knowledge base.

However, the fact showed reading text is not an easy thing. The students have some problems in reading comprehension, such as most of students were difficult in reading comprehension eventhough they have done it for many years. They did not know how to comprehend a text and got some information from the text, though the students sometimes knew the meaning of the words, but they got difficulties to conveyed the meaning to the whole paragraph. Moreover, during reading activity in teaching and learning process, students often lost their focus and consequently they talked to their friends for other bussiness, and considered reading a text was not uninteresting activity in learning English, when English teacher asked them to tell some information from their reading text, most of them did not have some ideas or opinion to clarify the information in the reading text, so the process of teaching reading did not run well.

Those problems of reading comprehension can be caused by two factors. First the students did not have good motivation to read because the text was not interesting, and they should comprehend every word of the text. Second, the students were lack in vocabulary, so if they wanted to understand the text, they must kept on looking up the words in a dictionary to found out the meaning of the words. Besides of it, Strategy which used was not suitable. Commonly, English

teacher teach reading comprehension by translating the reading text, so the students knew the meaning just from the English teacher. Because of this situation, the students got bored and uninterested in reading comprehension.

Nowadays in teaching reading, the English teacher focus to the students' English book. Teacher only ask the students to read the text aloud in the class and rare to explain what the meaning of the text. They only read and got the meaning of the text from their teacher, or they just read the text from the beginning until the end, and when they found some difficult words they stop to read and to looking for the meaning of the words in the dictionary. Therefore, it can be concluded that this strategy is not appropriate to be applied in the classroom.

In teaching learning, many strategies of teaching can be used to help students comprehend the lesson and make the teaching learning-process easier. In order to increase the students' ability in learning reading, the English teacher should be able to find an interesting strategy. Therefore, the students will be enjoyable in reading. The researcher introduce a strategy that appropriate in reading that is use words search strategy. Words Search Games is not only the game but also a teaching strategy which can provide the best exercises for confirming the meaning of words in the students' mind. By using Words Search Games it is expected that the students will get many new words. Another benefit using Words Search Game is to encourage the students to search for new words to enlarge their vocabulary and also motivate them to learn more seriously.

Ideally, if the English teacher use the various and excited strategies in teaching reading, the students will not have difficulties in learning it. That is why the researcher conducted a research with title **THE EFFECT OF WORDS SEARCH STRATEGY ON THE STUDENTS' ABILITY IN READING COMPREHENSION AT THE SECOND GRADE OF MTs AL-JAMI'YATUL WASLIYAH TEMBUNG IN ACADEMIC YEAR 2017/2018.**

B. Statement of the Problems

Based on the background of study, the problems in this research can be formulated as follows:

1. The students do not have good motivation in learning
2. The students are lack in vocabulary
3. The strategy which used is not suitable

C. Research Question

Based on the problems above, the research question is:

Is there any significant effect of Words Search Strategy on the students' ability in reading comprehension?

D. Purpose of the Study

In this research problem, the objective of study will aim:

To know the significant effect of Words Search Strategy on the students' ability in reading comprehension.

E. Significances of the Study

As it is described in the aim of the study above, this study will also expect to have significant contribution and useful for:

1. English Teacher

The result of this study hopefully can give useful contribution and can be used to consider in teaching learning process.

2. Students

The research is expected to be useful input for the students to encourage them to increase the students' achievement in reading comprehension.

3. The other researchers

Finally, the researcher who are interested in the teaching of English at Junior High School get useful information from the result of this study and leading them to further research on different aspect field.

F. Limitations of the Study

As mentioned on the background of the study above, words search strategy is one of the alternative solution that can be used by teacher in teaching reading comprehension in classroom, the problem is limited on the effect of words search strategy on the students' ability in reading comprehension. In addition, the researcher focuses on the students at the second grade of MTs Al-Jam'iyatul Wasliyah Tembung.

CHAPTER II

LITERATURE REVIEW

A. Review of Literature

To conduct a research, theories are needed to explain some concept and terms applied in research concerned. Therefore, the clarification of the concepts will minimize possible misunderstanding between the writer and the readers. In other words, they are very important to be explained, so that the readers will get the points clearly.

A.1. Definition of Reading

Allah SWT reveals in Surah Al-Alaq verse 1-5 Holy Qur'an:

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (2) اقْرَأْ وَرَبُّكَ
الْأَكْرَمُ (3) الَّذِي عَلَّمَ بِالْقَلَمِ (4) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ (5)

Meaning :

Read: In the name of the Lord Who create. Create the man from a clot.

Read: And the Lord is the Most Bounteous, Who teach by the pen. Teach the man that which he knew not. (Al-Alaq:1-5)²

The first word of this verse is IQRA! that means read. The verse above means that if we want to know something we must read. If we went to get some

²Lajnah Pentashih Mushaf Al-Qur'an, *Al-Jumanatul Ali Al-Qur'an dan Terjemahan*. Bandung: CV Penerbit J-Art, 2004, p. 597.

information or knowledge, we have to read. By reading much, it can enlarge our knowledge.

Reading is not only the process in which the reader reads the words, sentences or the text but also by reading the reader intends to get something from the reading materials. By having a good skill in reading, we can enlarge our knowledge and get lot of advantages from it.

Grabe and Stoller State reading is the ability to draw meaning from the printed page and interpret this information appropriately.³ It means that when a reader interacts with printed pages, their prior knowledge combine with the visual or written information result in his comprehending the message.

Deborah Daiek and Nancy Anter in their book define reading as: (1) Reading is two-way communication between an author and a reader (2) Reading is interpretation and understanding (3) Reading is a process (processes) (4) Reading is thinking.⁴

Tankersley state that reading is a complex process made up of several interlocking skills and process.⁵ It means that reading need many skills and understanding. One of them is adequate background skills. Without this reading is difficult and troublesome for them. Reading requires not only skillful readers but also high-level thinkers and processors of knowledge.

³ William Grabe and Fredricka L.Stoller, *Teaching and Researching Reading*. Great Britain : Pearson education, 2002, p. 9.

⁴ Deborah Daiek and Nancy Anter, *Critical Reading for College and Beyond*. New York: Mc.Graw Hill, 2004, p. 17

⁵ Karen Tankersley, *The Threads of Reading: Strategies for Literacy Development*. Alexandria, ASCD, 2003, p. 2.

According to the National Council of Teachers of English (NCTE) said that reading is a complex, purposeful, social and cognitive process in which readers simultaneously uses their knowledge of spoken and written language, their knowledge of the topic of the text, and their knowledge of their culture to construct meaning. Reading is not a technical skill acquired once and for all in the primary grades, but rather a developmental process. A reader's competence continues to grow through engagement with various types of texts and wide reading for various purposes over a lifetime.⁶

From the definition above, we can conclude that reading means that to find out the messenger or information that the writer put into the text as efficient as possible. Reading is the interacting between the reader and the writer through the printed text which requires the readers to bring their own knowledge of a language to recognize that print of the words, sentences and paragraph, and to interpret the author's message.

A.2. Types of Reading

There are two kinds of reading according to Jeremy Harmer.⁷

a. Intensive reading

According Patel and Jain, intensive reading is relate to further process in language learning under the teacher's guidance. Intensive reading will provide a basis for explaining difficulties of structure and for extending knowledge of vocabulary and idioms.⁸ Intensive reading can be increasing

⁶ Randi Stone, *Best Practice for Teaching Reading: What Award Winning Classroom Teachers Do*. California: Corwin Press, 2009, p. 85.

⁷ Jeremy Harmer, *How to Teach English*. Kuala Lumpur: Pearson Education, 2007, p. 99.

⁸ M. F. Patel and Praveen M. Jain, *English Language Teaching (Methods, Tools, Strategies)*. Jaipur: Sunrise Publishers & Distributors, 2008, p. 117.

learners' knowledge of language feature and their control of reading strategies. This activity is likely more emphasize the accuracy activity involving reading for detail. It is use to gaining a deep understanding of a text, which is important for the reader.

The classic procedure of intensive reading is the grammar-translation approach where the teacher uses the first language to explain the meaning of the text, sentence by sentence. The use of translation is to analyze feature of language that they learn, and to make sure the learners' comprehension.⁹

b. Extensive reading

Brown explains that extensive reading is carry out to achieve a general understanding of they are reading.¹⁰ According Paten and Praveen the purpose of extensive reading is to ask the students to read directly and fluently in target language for enjoyment, without aid of teacher.¹¹ It means that extensive reading does not need teacher's guidance. So, the teacher can be only a facilitator to care for them whether or not they understand. Extensive reading is always done for the comprehension, not for specific details.

Extensive reading can be source of enjoyment and a way of gaining knowledge of the world. Extensive reading is focused on the story not on items to learn.¹² it can be said that the aim of extensive reading is to read pleasure and get the general idea of the story or texts.

⁹ I. S. P. Nation, *Teaching ESL/EFL Reading and Writing*. New York: Routledge, 2009, p.25.

¹⁰ H. Douglas Brown, *Teaching by Principles an Interactive Approach to Language Pedagogy*. New York: Wesley Longman Inc, 2001, p. 313.

¹¹ M. F. Patel and Praveen, *Op.cit.*, p. 119.

¹² Nation, *Op.cit.*, p. 49-50.

A.3. Definition of Reading Comprehension

Reading consists of two related processes, word recognition and comprehension. Word recognition refers to the process of perceiving how written symbols correspond to one's spoken language. Reading comprehension is an ability of a reader to comprehend the text that they are reading. To comprehend the text, the reader needs a lot of effort because every person has different background knowledge. There are some people who would have a broader background knowledge while some others do not. It makes people have to glide over the text.

According to Kristen Lems, reading comprehension is the ability to construct meaning from a given written text. Reading comprehension is not a static competency, it varies according to the purposes for reading and the text that is involved.¹³ It means that reading becomes an evolving interaction between the text and the background knowledge of the reader. This is accomplished through use of strategies, both cognitive and meta-cognitive.

Caldwell also stated that, "comprehension encompasses three components: an active process of comprehending; the skill, knowledge base, and motivation of the reader and the difficulty and characteristic of the text that is read, listened to, or watched."¹⁴ It can be said that in comprehending the text, readers need some skill, strategies, and aptitude towards constructing the meaning from the text.

¹³ Kristin Lems, Leah D. Miller, and Tenena M. Soro, *Teaching Reading to English Language Learners*. New York: The Guilford Press, 2010, p. 170.

¹⁴ JoAnne S. Caldwell, *Comprehension Assessment*. New York: The Guilford Press, 2008, p. 4.

Reading comprehension is dependent on three factors. The first factor is that the reader has command of the linguistic structures of the text. The second factor is that the reader is able to exercise meta-cognitive control over the content being read. This means that the reader is able to monitor and reflect on his or her own level of understanding while reading the material. The third and most important criterion influencing comprehension is that the reader has adequate background in the content and vocabulary being presented.¹⁵ It means that a good readers should make connections between background knowledge and the new information in the text.

Those are some statements that assume reading comprehension. In other words, reading comprehension is a complex activity that includes many purposes such as reading to get the specific information and general idea of the text. Moreover, the reader has to read a lot and train his ability to get the idea of the text.

A.4. Definition of Ability

The word 'ability' is derived from the adjective 'able', which has similar meaning as 'can'. Robbins states that ability means capacity of an individual to do some actions in one work (kemampuan (ability) berarti kapasitas seorang individu untuk melakukan beragam tugas dalam suatu pekerjaan).¹⁶

So, the definition of ability is:

¹⁵ Tankersley, *Op.cit*, p. 90

¹⁶ Stephen P. Robbins and Timothi A. Judge, *Perilaku Organisasi (Organizational Behaviour) Edisi 12*, Jakarta: Penerbit Salemba Empat, 2008, p. 53.

- a. The quality of being able to do something, especially the physical, mental, financial, or legal power to accomplish something..
- b. The natural or acquired skill or talent.
- c. The quality of being suitable for receptive to a specified treatment capacity.¹⁷

A.5. Definition of Strategy

According to Oxford dictionary, strategy is a plan intended to achieve a particular purpose.¹⁸ The general principle is the use of learning strategy that not all learning strategies are suitable to achieve the goals and all circumstances. Killen said “No teaching strategy is better than others in a circumstance, so you have to able to use a variety of teaching strategies and make rational decisions about when each of strategies is likely to be the most effective”. What is proposed by Killen is clear that teachers should be able to choose the strategy that is suitable to the circumstances. Therefore, teachers need to understand the general principles of the use of learning strategies.¹⁹

From the definition above, it can be concluded that the learning strategy is a plan of action which includes that use of methods and utilization of various resources/strengths in learning. This means that in the preparation of a new strategy to the process of preparing the work plan has not come to the action. Strategies designed to achieve specific goals here means that the direction of all the decisions of strategy is the achievement of goals, so that

¹⁷ *The American Heritage Dictionary of the English Language Fifth Edition*, America: Houghton Mifflin Harcourt Publishing Company, 2018, p.4.

¹⁸ *Oxford Learner's Pocket Dictionary*, Oxford: Oxford University Press, p. 427

¹⁹ Wina Sanjaya, *Strategi Pembelajaran Berorientasi Standar Proses Pendidikan*, Jakarta: Kencana, 2006, p. 3.

the steps of learning, the use of various facilities, a learning resources are all geared towards the achievement of goals.

In Islam, Allah proclaims that learning or teaching strategy is needed in learning process, because by applying a strategy the students will easier understand about the material.

Allah says in the Qur'an An-Nahl: 125:

ادْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحُكْمَةِ وَالْمَوْعِظَةِ الْحَسَنَةِ ۚ وَجَادِلْهُمْ بِالَّتِي هِيَ
أَحْسَنُ ۚ إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ ۚ وَهُوَ أَعْلَمُ بِالْمُهْتَدِينَ

“invite (all) to the way of the Lord with wisdom and beautiful preaching, and argue with them in ways that are best and most gracious. For the Lord know the best, who have strayed from His path and who receive guidance”²⁰ From the verse above Allah asks to all moslem to teach the students by using strategy or method in learning process.

The importance of learning process is supported by teaching of Islam. Islam is a religion which establishes compulsory education with the following hadith :

طَلَبُ الْعِلْمِ فَرِيضَةٌ عَلَى كُلِّ مُسْلِمٍ وَمُسْلِمَةٍ

The meaning : “Seek knowledge is obligation for moeslim”.²¹ Based on the above hadith the Prophet confirms obligation to see a knowledge. It can be said that the study is very important for humans and it became clear that learning

²⁰ *Al-Jumanatul Ali Al-Qur'an dan Terjemahan*, Op.Cit, p. 281

²¹ Ibnu Hajar Al-Asqalani, *Ringkasan Taribghib waTarhib*, Jakarta: Pustaka Azzam, 2006, p. 27.

or studying is obligation for every moeslim, with the knowledge we can share our knowledge to others, it can be useful for others that will lead us to happiness both in this world and here after. Therefore there is no reason for any individual Moeslim to be lazy in learning that makes them not knowing anything about science.

A.6. Words Search Strategy

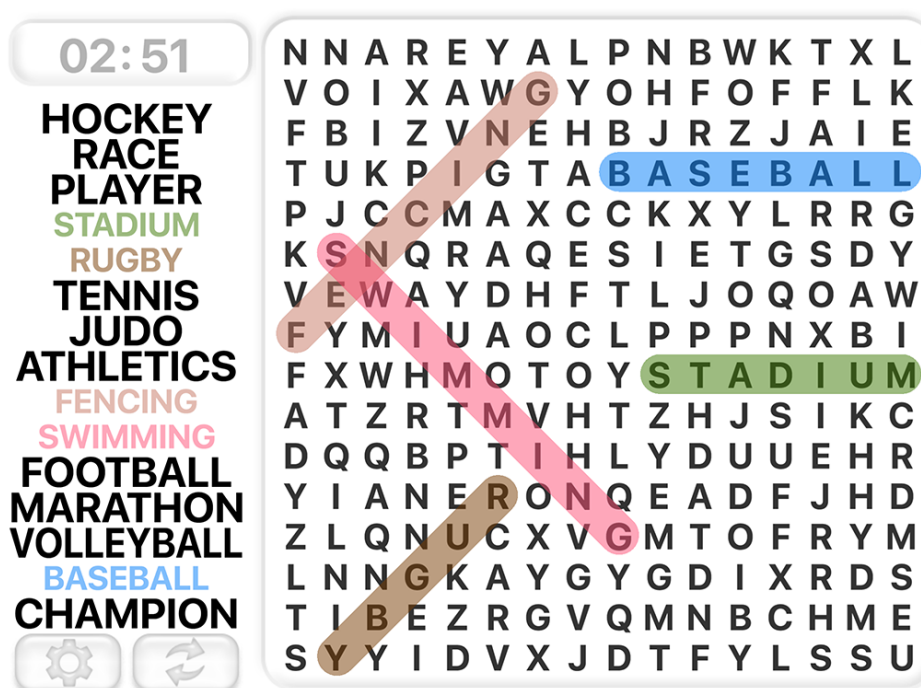
A word Search is a word game that is letters of a word in a grid, that usually has rectangular or square shape. The objective of this puzzle is to find and mark all the words hidden inside the box. The words may be horizontally, vertically or diagonally. Often a list of the hidden words is provided, but more challenging puzzles may let the player figure them out. Many word search puzzles have a theme to which all the hidden words are related. Games also will encourage and motivate students to learn in order to make the learning process fun and exciting. Games are an effective way of giving meaning, motivating, atmosphere that relaxes and gives students the chance to develop their skill and language skill.

Word Search is a game where students have to find the vocabulary words in random letters in a box. To find a word, the student must make a horizontal line, down or diagonally.²² The game is believed to assist students in achieving learning goals, because it can motivate them to reduce boredom. Word search is a puzzle consisting of letters arranged in a grid which contains a number of hidden words written in various directions.²³

²² John Wiley & Sons, Inc. Words Search Games
http://en.wikipedia.org/wiki/word_search, accessed on 22 February 2018 at 15:18.

²³ Farlex. Words Search Puzzle

So, it can be concluded that Word Search is a game where students have to find the vocabulary words in random letters in a box. Furthermore, in using games in the classroom, it is important to explain the rules before playing the game so they can understand how to play the game. By language game in teaching English, it is hoped the students will more enjoy and interest in learning English. Teachers must create instructional strategies to enhance student understanding in target language. Games help students for remain interested in learning the language. Games also help the teacher to create a context in which the language is useful and meaningful.



A.7. The Procedures Words Search Games

There are several steps that the students and teacher should do in this game, which is as follows: (1) The teacher also explain about the clues of the

games. (2) Find the word in the box by providing a horizontal line, down or cross. (3) Write the word at the end of each instruction. (4) After the students found a words from the box, they write a new words beside the box and find out the meaning of the words. (5) time was limited to a half hour. (6) For students who can complete the job before the time expires, the award is given, the teacher gave the plus sign (+) on the answer sheet. (7) The work of students in check when the time is over.²⁴

The advantages and disadvantages of Words Search Games are follows:

A.7.1. The Advantages of Words Search Games

There are some advantages of using Words Search Games: (a) Words Search Games were fun and students love to play. Through games children has experiment, discover and interaction with the environment, (b) Words Search Games add variation to a lesson and increase motivation by encouraging sensible to use the target language, (c) Games are student-centered in that students are active in playing games, and games can often be organized such that students have the leading roles, with teachers as facilitators, (d) the shy students can participate positively, (e) Words Search Games help students keep trying to learn, (f) Words Search Games encourage students to interact and communicate, (g) Games provide practice language skills, (h) Words Search Games can increase vocabulary by helping children to expand their knowledge of

²⁴Steven J. Molinsky & Bill Bliss, *Handbook of Vocabulary Teaching Strategies*, New Jersey: Prentice Hall Regents, 1994, p. 13.

what words mean, (i) By using a great game like Words Search, students can learn to spell new words or can learn to remember all the words on their current spelling list. (j) Using a word search game in the classroom can be helpful to teachers as well. Teachers can increase the excitement of students by allowing game time instead of just using a simple list for study time, (k) Word Search Games can increase the learning ability of all types of students.

A.7.2. The Disadvantages of Words Search Games

There are some disadvantages of using Words Search Games in learning process:

- (a) It took a long time for students to complete the tasks and accomplishments,
- (b) Requires certain trait or tendency of students to work together in solving problems,
- (c) Sometimes the class becomes noise, so that can interfere with other groupss,
- (d) The teacher should spend more time.²⁵

A.8. Teacher Centered

For many years, the traditional teaching style or specifically, teacher centered instruction has been dominant in higher education in North America. In a traditional classroom, students become passive

²⁵ Danica Reynes Words Search Games
<http://www.learninggamesforkids.com/word-games/word-search-games.html>. Accessed on 26 February 2018 at 16.18

learners, or rather just recipients of teachers' knowledge and wisdom. They have no control over their own learning. Teachers make all the decisions concerning the curriculum, teaching methods and the different forms of assessment. Duckworth asserts that teacher centered learning actually prevents students' educational growth.²⁶

Huba and Freed described teacher centered learning as: students passively receive information, emphasis is on acquisition of knowledge, and teachers' role is to be primary information giver and primary and evaluator. There is no room for students' personal growth.²⁷

B. Conceptual Framework

There are four skill that should be learn by students in English learning. they are : reading, writing, speaking, and listening. Reading is an important skill in life because we can get the information from reading, we can add our knowledge from reading. Therefore teaching reading should do carefully and affectively. However, Some problems of reading at the second grade students MTs Al-Jam'iyatul Wasliyah Tembung have difficulties to tell some information from their reading text, most of them did not have some ideas or opinion to clarify the information in the reading text. It can be detected from their difficulty to convey the meaning to the whole paragraph. The students also seemed get difficult in vocabulary. They are so struggle to translate every single word in reading text.

²⁶ Duckworth, *Helping Students Get to Where Ideas Can Find Them*, Florida : The New Educator, p. 5.

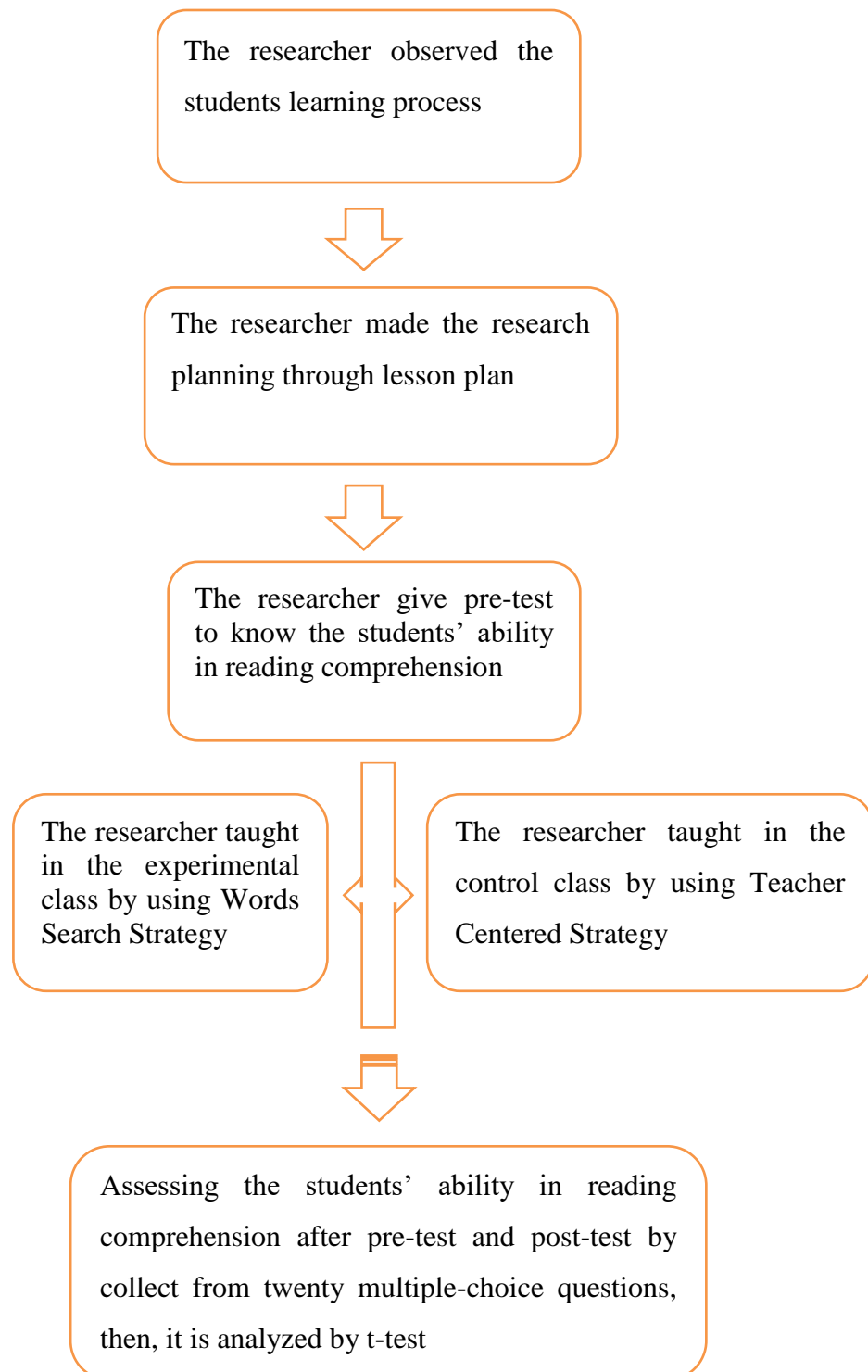
²⁷ Huba, M.E., & Freed, J.E, *Teacher Centered Vs Learner centered Paradigms*. Retrived from:
<http://assessment.uconn.edu/docs/TeacherCenteredVsLearnerCenteredParadigms.pdf>

Majority of students think that reading is very difficult thing. So to teach it needs an attractive strategy to make it easier. The teachers' strategy is so important in teaching and learning process because it will influence the students' to join the lesson and improve their interest in learning.

In teaching, the teacher has to use various strategies because by using it, it can make the students have interest in studying especially English by using games in learning reading comprehension. By using the games will give motivation, fun and interesting to the students and they will be able to understand the lesson easily.

Words Search Game is one of the game that easy to use. It has many advantages. This game also will help and encourage for many learners enjoy the topic. It is very important to the students to develop their skill in learning English language. So that, the teacher has to used interesting strategy to teach reading comprehension.

Based on the explain above, it can be predict that words search strategy can be use and can be effect students' vocabulary mastery in long term memory so that the students will be easier to comprehend reading text.



C. Hypothesis

The term of hypothesis comes from Greek consist of two words they are “*Hupo*” and “*Thesis*” (statement or theory). Karlinger and Tuckman define hyphotesis is a suppose to the correlation between two or more variables, and Sudjana in Method of Statistic define hyphotesis is assumption or suppose about thing that made to explain it and often asked to do check.²⁸

Based on theoretical and conceptual framework the two hyphotesis of this research can be formulated.

1. Alternative Hyphotesis (H_a)

“There is a significant effect of the students’ ability in reading comprehension taught by words search strategy”.

2. Null Hypothesis (H_0)

“There is no a significant effect of the students’ ability in reading comprehension taught by words search strategy.

²⁸ Indra Jaya, *Penerapan Statistik Untuk Pendidikan*, Bandung: Citapustaka Media Perintis, 2013, p. 107.

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This study would be conducted in experimental research design with pre-test and post-test design. The design would be applied in order to investigate the effect of words search strategy on students' ability in reading comprehension. This research consisted of two different class, namely experimental group and control group. Experimental group is the group that received treatment, while the control group is a separate group that receives no treatment or a different treatment than the experimental group.²⁹ The experimental is taught by using words search games and control group is taught by another strategy. Both of group would be given pre-test and post-test with the same material and test.

There are two variables in this study; they are independent and dependent variable. Independent variable is the effect of words search strategy while the dependent variable is the students' ability in reading comprehension. The design can be presented as follows:

Table I
Research Design

Group		Treatment	
Experimental Group	Pre-test	Words Search Strategy	Post-test
Control Group	Pre-test	Teacher Centered Strategy	Post-test

²⁹ Marguerite G. Et al. *Methods in Educational Research From Theory to Practice Second Edition*, San Fransisco: Jossey-Bass, 2010, p. 229.

B. Population and Sample

B.1. Population

Population is all data that concern in a scope and time that specified.³⁰

The population in this research is all students of second grade of MTs Al-Jam'iyatul Wasliyah Tembung, North Sumatera in academic year of 2017/2018. The population of the research is distribute as follow:

Table II
The Distribution of Population

NO	Class	Total
1	VIII-1	43
2	VIII-2	40
3	VIII-3	40
4	VIII-4	41
5	VIII-5	40
6	VIII-6	44
7	VIII-7	42
8	VIII-8	44
9	VIII-9	40
Total		374

DataSource: Office Statistical Data of MTs Al-Jam'iyatul Wasliyah Tembung- Academic Year 2017/2018

³⁰ Syahrums, Salim, *Metodologi Penelitian Kuantitatif*, Bandung : Citapustaka Media, 2016, p. 113.

B.2. Sample

Sample is part of population, which is chosen to participate in the study. The researcher did not observe all of classes but only two classes, that was second grade. Sampling is the process done to choose and take sample correctly from population so that can be used as valid representative to the population. In this research, the researcher took the subject of research randomly. The subjects were regarded that each of them has the equal chance to be chosen as the sample. The sample might be categorize in pair sample because there were experimental and control group that were compared. Two classes were chosen randomly, in which class VIII-3 consist of 40 students and class VIII-5 consist of 40 students, so the total of my sample were 80 students. Class VIII-3 was chosen as the control group which is taught without Words Search Strategy while class VIII-5 was chosen as the experimental group which is taught by Words Search Strategy. The researcher's consideration choosing the sample based on the cognitive structure of the students in each class.

Table III
The Distribution of Sample

No	Class	Number
1	VIII- 3	40
2	VIII-5	40
Total		80

C. Data Collections

The procedures of collecting data are such the following:

1. Pre-Test

Pre-Test Both of groups, the experimental group and control group were given before treatment. The teacher would asked the students to answer the multiple choice test

2. Treatment

There were two groups taught, they are experimental group and control group. Experimental group was taught by using Words Search Strategy. Control group was taught by using Teacher Centered strategy. There were four meetings in this research and each meeting consisted of 40 minutes.

3. Post-test

After conducting the treatment, the post-test would be given to find out the result of teaching presentation in both groups. It would be applied to analyze and evaluate both of the groups, then to know the effect of the treatment.

4. Observation

Observation is the action of watching something carefully. The comment or the remark based on something has been seen written in the observation sheet. Observation is to be used in the sense “an act or instance of watching”, the use observation to mean an act of happen in the classroom during the teaching-learning process.

D. Data Analysis

Gain Score analysis is a method of data analysis from experimental design by finding the difference value of post-test and pre-test, moreover the gain score analysis is used if there is interaction / difference between group or group with pre score. Basically the gain score is the value of the difference in scores and can be tested using t-test.³¹

Gain score = post-test – pre-test

- Experimental group = post-test – pre-test
- Control group = post-test – pre-test

To find out the effect of using words search strategy on the students' ability in reading comprehension, mean of the control group and experimental group will be compared by using t-test, as follows:

$$t = \frac{Ma - Mb}{\sqrt{\left(\frac{da^2 + db^2}{Na + Nb - 2}\right)\left(\frac{1}{Na} + \frac{1}{Nb}\right)}}$$

In which:

- t : total score
- Ma : the mean of experimental group
- Mb : the mean of control group
- Da² : the standard of deviation of experimental group
- Db² : the standard of deviation of control group
- Na : the total numbers of experimental group
- Nb : the total numbers of control group³²

³¹<http://www.statistikopensource.com/r/gain-score-dan-cohen-d-dalam-penelitian-eksperimen>. Accessed on 30 April 2018 at 11.48

³² Suharsimi Arikunto, *Prosedur Penelitian*, Jakarta : PT. Rineka Cipta, 2010, p.352.

D.1. Normality test

Normality test was held to determine whether normal or abnormal research data or research variables.

- a. The observation $X_1, X_2, X_3, \dots, X_n$ are served raw numbers $Z_1, Z_2, Z_3, \dots, Z_n$ using the formula. To count of raw numbers with the formulas :

$$Z_i = \frac{X_i - \bar{X}}{SD}$$

\bar{X} = Average sample

S = Standard deviation

- b. For each of these raw numbers using standard normal distribution is calculated odds $F(Z_i) = P(Z \leq Z_i)$
- c. Furthermore, in calculating the proportion that expressed by $S(Z_i)$ then :

$$S(Z_i) = \frac{\text{total of } Z_1, Z_2, \dots, Z_n \text{ which } \leq Z_n}{n}$$

- d. Calculate $F(Z_i) - S(Z_i)$ and define the absolute price Determine the largest price of the difference $F(Z_i) - S(Z_i)$ as Lo .³³

D.2. Homogeneity test

Homogeneity Test is used to determine whether the sample variance has the same or homogeneous variance, test of homogeneity is used with the following formula³⁴:

³³ Indra Jaya, *Opcit.*, p. 253.

³⁴ Sudjana, *Metode Statistika*, Bandung: Tarsito Bandung, 2009, p. 14.

$$F = \frac{\text{Highest varians}}{\text{lowest varians}}$$

Criteria for testing H_0 is rejected if $F \geq F_{0,05} (v1, v2)$ where $F_{0,05} (v1, v2)$ obtained from the F distribution list with a chance of $\alpha = 0,05$ and $\alpha = 0,01$, whereas the $v1$ and $v2$ degrees of freedom each corresponding to df numerator and denominator of the formula above.

E. Research Procedure

In conducted the research, there were some procedures that applied for taking the data:

1. The researcher observed the location and population were carried out. The research would be conducted in two classes (experimental group and control group). Before treating the students using words search as strategy of learning, the researcher administered the pre-test to the students in both classes with the same instrument.
2. The treatment was reading comprehension by using words search strategy in VIII-5 class as the experimental class and no treatment in VIII- 3 as the control class. The presentation of the lesson would be done by the researcher.
3. Post-test would be given after finishing the treatment. The researcher would use the same format of test for both of classes. Even though the test instrument was same, students did not realize that would be examined again later. Finally, the researcher made a calculation of the result from both of the test.

CHAPTER IV

FINDINGS AND DISCUSSIONS

A. Findings

A.1. Description Data

This study was conducted by applying an experimental research. There were two groups in this research, namely experimental and control group. This research was applied a reading test which the total score is 100. The pre test was given before the treatment and the post test was given after the treatment. The researcher gave the treatment to students in the experimental group by applying Words Search Strategy while control group without applying words search strategy.

After conducting the research, the researcher got the data of students' scores in pre test and post test from both experimental and control group.

A.1.1. The Score of Pre Test and Post Test of Experimental Group

Table IV
The Score of Pre Test of Experimental Group

No.	Students' Initial	Pre Test
1	AP	70
2	AS	90
3	AA	70
4	ASP	80
5	EDFD	80
6	FB	75
7	HRP	70
8	IS	75
9	IS	85
10	JASN	70

No	Students' Initial	Pre Test
11	J	50
12	JH	90
13	KS	90
14	M	80
15	MS	75
16	MHS	75
17	NS	70
18	NIL	80
19	NF	50
20	N	85
21	NS	75
22	NSN	70
23	NHR	70
24	NHL	70
25	RAH	75
26	RSL	80
27	RO	60
28	RNS	65
29	RWH	70
30	RAS	85
31	RAN	60
32	SS	70
33	SNS	85
34	SR	80
35	SZB	80
36	SW	75
37	SR	50
38	TR	65
39	UDP	65
40	ZIP	65

Total	$\Sigma = 2945$
Mean	73.625

Based on the table above, the students' ability in reading comprehension in experimental group showed the lowest score of pre-test was 50, and the highest score of pre-test was 90 and the mean of pre-test was 73.625.

Table V
The Score of Post Test of Experimental Group

No.	Students' Initial	Post Test
1	AP	85
2	AS	95
3	AA	85
4	ASP	90
5	EDFD	85
6	FB	80
7	HRP	75
8	IS	80
9	IS	90
10	JASN	75
11	J	80
12	JH	80
13	KS	95
14	M	85
15	MS	80
16	MHS	80
17	NS	75
18	NIL	85
19	NF	60
20	N	95

No	Students' Initial	Post Test
21	NS	85
22	NSN	85
23	NHR	80
24	NHL	75
25	RAH	80
26	RSL	85
27	RO	80
28	RNS	90
29	RWH	75
30	RAS	90
31	RAN	85
32	SS	85
33	SNS	90
34	SR	85
35	SZB	85
36	SW	80
37	SR	60
38	TR	70
39	UDP	75
40	ZIP	70
Total		$\Sigma = 3265$
Mean		81.625

Based on the table above, the students' ability in reading comprehension in experimental group showed the lowest score of post-test was 60, and the highest score of post-test was 95 and the mean of post-test was 81.625.

A.1.2. The Score of Pre Test and Post Test of Control Group

Table VI
The Score of Pre Test of Control Group

No.	Students' Initial	Pre Test
1	AM	75
2	AYL	60
3	AS	80
4	ASR	65
5	AZ	65
6	AD	70
7	ADKS	50
8	AAS	55
9	CMN	80
10	DA	80
11	DA	70
12	DA	60
13	DW	60
14	EA	80
15	E	75
16	FZH	50
17	FK	60
18	HSS	60
19	LM	60
20	MAL	70
21	NN	75
22	NN	75
23	NF	65
24	NIS	70
25	NRM	80
26	RSN	75
27	RY	80

No	Students' Initial	Pre Test
28	SA	70
29	S	70
30	S	70
31	SK	65
32	SRAH	65
33	SA	65
34	SK	55
35	SLB	75
36	S	60
37	SDYL	65
38	ST	65
39	TSS	70
40	YAD	80
Total		$\Sigma = 2720$
Mean		68

Table VII
The Score of Post Test of Control Group

No.	Students' Initial	Post Test
1	AM	85
2	AYL	65
3	AS	85
4	ASR	75
5	AZ	70
6	AD	75
7	ADKS	55
8	AAS	65
9	CMN	85
10	DA	85
11	DA	80

No	Students' Initial	Post Test
12	DA	75
13	DW	70
14	EA	85
15	E	85
16	FZH	60
17	FK	70
18	HSS	75
19	LM	70
20	MAL	75
21	NN	80
22	NN	80
23	NF	75
24	NIS	75
25	NRM	85
26	RSN	80
27	RY	85
28	SA	80
29	S	80
30	S	80
31	SK	75
32	SRAH	70
33	SA	70
34	SK	65
35	SLB	85
36	S	75
37	SDYL	80
38	ST	75
39	TSS	75
40	YAD	85
Total		$\Sigma = 3045$

Mean	76.125
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Based on the table above, the students' score in reading comprehension in control group showed the lowest score of pre-test was 50, and the highest score of pre-test was 80 and the mean of pre-test was 68. On the other hand the lowest score of post-test was 55, and the highest score of post-test was 85 and the mean of post-test was 76.125.

Based on the explanation above, it showed that the students' score in experimental group was higher than students' score in control group, where in pre-test (73.625) and the score in post-test (81.625). The total score of the mean score in experimental and control group showed that there was significant effect in improvement of students' score between pre-test and post-test.

A.2. Normality Testing

Normality testing is used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.

A.2.1. Normality Testing of Experimental Group

Table VIII
Frequency Distribution of Pre Test in Experimental Group

NO	Xi	Fi	FiXi	Xi²	FiXi²
1	50	3	150	2500	7500
2	60	2	120	3600	7200
3	65	3	195	4225	12675
4	70	10	700	4900	49000
5	75	7	525	5625	39375
6	80	7	560	6400	44800
7	85	5	425	7225	36125
8	90	3	270	8100	24300

Total	40	2945	42575	220975
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Based on the data above, the result of $F_i X_i^2$ is 220975 and $F_i X_i$ is 2945.

Then the following is the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{X} = \frac{\sum F_i X_i}{\sum F_i}$$

Where:

\bar{X} = Mean of variable x

$\sum F_i X_i$ = Total number of score

$\sum F_i$ = Number of sample

So,

$$\bar{X} = \frac{\sum F_i X_i}{\sum F_i}$$

$$= \frac{2945}{40}$$

$$= 73.63$$

b. Variant

Where:

S^2 = Variant

N = Number of sample

So,

$$S^2 = \frac{n \sum F_i X_i^2 - (\sum F_i X_i)^2}{n(n-1)}$$

$$\begin{aligned}
&= \frac{40 \times 220975 - (2945)^2}{40(40-1)} \\
&= \frac{8839000 - 8673025}{40(39)} \\
&= \frac{165.975}{1560} \\
&= 106.39
\end{aligned}$$

c. Standard Deviation

$$\begin{aligned}
S &= \sqrt{S^2} \\
&= \sqrt{106.39} \\
&= 10.31
\end{aligned}$$

After getting the calculation of mean, variant and deviation standard, then the next step is to find out the normality of the test. It means that the test was given to the students is observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table IX
Normality Testing of Pre Test in Experimental Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	50	-2.29	0.011	0.075	-0.064
2	50	-2.29	0.011	0.075	-0.064
3	50	-2.29	0.011	0.075	-0.064
4	60	-1.32	0.0934	0.125	-0.0316
5	60	-1.32	0.0934	0.125	-.0316
6	65	-0.84	0.2005	0.2	0.0005
7	65	-0.84	0.2005	0.2	0.0005
8	65	-0.84	0.2005	0.2	0.0005
9	70	-0.35	0.3632	0.45	-0.0868

No	Score	Zi	F(Zi)	S(Zi)	F(Zi)- S(Zi)
10	70	-0.35	0.3632	0.45	-0.0868
11	70	-0.35	0.3632	0.45	-0.0868
12	70	-0.35	0.3632	0.45	-0.0868
13	70	-0.35	0.3632	0.45	-0.0868
14	70	-0.35	0.3632	0.45	-0.0868
15	70	-0.35	0.3632	0.45	-0.0868
16	70	-0.35	0.3632	0.45	-0.0868
17	70	-0.35	0.3632	0.45	-0.0868
18	70	-0.35	0.3632	0.45	-0.0868
19	75	0.13	0.5517	0.63	-0.0783
20	75	0.13	0.5517	0.63	-0.0783
21	75	0.13	0.5517	0.63	-0.0783
22	75	0.13	0.5517	0.63	-0.0783
23	75	0.13	0.5517	0.63	-0.0783
24	75	0.13	0.5517	0.63	-0.0783
25	75	0.13	0.5517	0.63	-0.0783
26	80	0.62	0.7324	0.8	-0.0676
27	80	0.62	0.7324	0.8	-0.0676
28	80	0.62	0.7324	0.8	-0.0676
29	80	0.62	0.7324	0.8	-0.0676
30	80	0.62	0.7324	0.8	-0.0676
31	80	0.62	0.7324	0.8	-0.0676
32	80	0.62	0.7324	0.8	-0.0676
33	85	0.91	0.8186	0.93	-0.1114
34	85	0.91	0.8186	0.93	-0.1114
35	85	0.91	0.8186	0.93	-0.1114
36	85	0.91	0.8186	0.93	-0.1114
37	85	0.91	0.8186	0.93	-0.1114
38	90	1.59	0.9441	1	-0.0559
39	90	1.59	0.9441	1	-0.0559
40	90	1.59	0.9441	1	-0.0559
Total	2945	Lo = 0.0005			
Mean	73.63	Lt = 0.14			

a. Finding Z score

$$\text{Formula: } Z_i = \frac{X_i - \bar{X}}{s}$$

$$Z_i 1 = \frac{50 - 73.63}{10.31} = -2.29$$

$$Z_i 2 = \frac{60 - 73.63}{10.31} = -1.32$$

$$Z_i 3 = \frac{65 - 73.63}{10.31} = -0.84$$

$$Z_i 4 = \frac{70 - 73.63}{10.31} = -0.35$$

$$Z_i 5 = \frac{75 - 73.63}{10.31} = 0.13$$

$$Z_i 6 = \frac{80 - 73.63}{10.31} = 0.62$$

$$Z_i 7 = \frac{85 - 73.63}{10.31} = 0.91$$

$$Z_i 8 = \frac{90 - 73.63}{10.31} = 1.59$$

b. Finding S(Z_i)

$$S(Z_i) = \frac{F_{Kum}}{N}$$

$$\frac{3}{40} = 0.075$$

$$\frac{5}{40} = 0.125$$

$$\frac{8}{40} = 0.2$$

$$\frac{18}{40} = 0.45$$

$$\frac{25}{40} = 0.63$$

$$\frac{32}{40} = 0.8$$

$$\frac{37}{40} = 0.93$$

$$\frac{40}{40} = 1$$

From the table above, it can be seen that Liliefors observation or $L_o = 0.0005$ with $n = 40$ and at real level $\alpha = 0.05$ from the list of critical value of Liliefors table $L_t = 0.14$. It is known that the coefficient of $L_o (0.0005) < L_t (0.14)$. So it can be concluded that the data distribution of the students' ability in reading comprehension is **normal**.

Table X
Frequency Distribution of Post Test in Experimental Group

NO	X_i	F_i	$F_i X_i$	X_i^2	$F_i X_i^2$
1	60	2	120	3600	7200
2	70	2	140	4900	9800
3	75	6	450	5625	33750
4	80	10	800	6400	64000
5	85	12	1020	7225	86700
6	90	5	450	8100	40500
7	97	3	285	9025	27075
Total		40	3265	44875	269025

Based on the data above, the result of $F_i X_i^2$ is 269025 and $F_i X_i$ is 3265.

Then the following is the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{X} = \frac{\sum F_i X_i}{\sum F_i}$$

Where:

$$\bar{x} = \text{Mean of variable } x$$

$$\sum F_i X_i = \text{Total number of score}$$

$$\sum F_i = \text{Number of sample}$$

So,

$$\bar{x} = \frac{\sum F_i X_i}{\sum F_i}$$

$$= \frac{3265}{40}$$

$$= 81.63$$

b. Variant

Where:

$$S^2 = \text{Variant}$$

$$N = \text{Number of sample}$$

So,

$$S^2 = \frac{n \sum F_i X_i^2 - (\sum F_i X_i)^2}{n(n-1)}$$

$$= \frac{40 \times 269025 - (3265)^2}{40(40-1)}$$

$$= \frac{10761000 - 10660225}{40(39)}$$

$$= \frac{100.775}{1560}$$

$$= 64.60$$

c. Standard Deviation

$$\begin{aligned}
 S &= \sqrt{S^2} \\
 &= \sqrt{64.60} \\
 &= 8.04
 \end{aligned}$$

After getting the calculation of mean, variant and deviation standard, then the next step is to find out the normality of the test. It means that the test was given to the students was observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table XI
Normality Testing of Post Test in Experimental Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	60	-2.69	0.0036	0.05	-0.0464
2	60	-2.69	0.0036	0.05	-0.0464
3	70	-1.45	0.0735	0.1	-0.0265
4	70	-1.45	0.0735	0.1	-0.0265
5	75	-0.82	0.2061	0.25	-0.0439
6	75	-0.82	0.2061	0.25	-0.0439
7	75	-0.82	0.2061	0.25	-0.0439
8	75	-0.82	0.2061	0.25	-0.0439
9	75	-0.82	0.2061	0.25	-0.0439
10	75	-0.82	0.2061	0.25	-0.0439
11	80	-0.20	0.4207	0.5	-0.0793
12	80	-0.20	0.4207	0.5	-0.0793
13	80	-0.20	0.4207	0.5	-0.0793
14	80	-0.20	0.4207	0.5	-0.0793
15	80	-0.20	0.4207	0.5	-0.0793
16	80	-0.20	0.4207	0.5	-0.0793
17	80	-0.20	0.4207	0.5	-0.0793
18	80	-0.20	0.4207	0.5	-0.0793
19	80	-0.20	0.4207	0.5	-0.0793

No	Score	Zi	F(Zi)	S(Zi)	F(Zi)- S(Zi)
20	80	-0.20	0.4207	0.5	-0.0793
21	85	0.42	0.6628	0.8	-0.1372
22	85	0.42	0.6628	0.8	-0.1372
23	85	0.42	0.6628	0.8	-0.1372
24	85	0.42	0.6628	0.8	-0.1372
25	85	0.42	0.6628	0.8	-0.1372
26	85	0.42	0.6628	0.8	-0.1372
27	85	0.42	0.6628	0.8	-0.1372
28	85	0.42	0.6628	0.8	-0.1372
29	85	0.42	0.6628	0.8	-0.1372
30	85	0.42	0.6628	0.8	-0.1372
31	85	0.42	0.6628	0.8	-0.1372
32	85	0.42	0.6628	0.8	-0.1372
33	90	1.04	0.8508	0,93	-0.0792
34	90	1.04	0.8508	0,93	-0.0792
35	90	1.04	0.8508	0,93	-0.0792
36	90	1.04	0.8508	0,93	-0.0792
37	90	1.04	0.8508	0,93	-0.0792
38	95	1.66	0.9515	1	-0.0485
39	95	1.66	0.9515	1	-0.0485
40	95	1.66	0.9515	1	-0.0485
Total	3265	Lo = -0.0265			
Mean	81.63	Lt = 0.14			

a. Finding Z score

$$\text{Formula: } Z_i = \frac{X_i - \bar{X}}{s}$$

$$Z_i 1 = \frac{60 - 81.63}{8.04} = -2.69$$

$$Z_i 2 = \frac{70 - 81.63}{8.04} = -1.45$$

$$Z_i 3 = \frac{75 - 81.63}{8.04} = -0.82$$

$$Z_i 4 = \frac{80 - 81.63}{8.04} = -0.20$$

$$Z_i 5 = \frac{85 - 81.63}{8.04} = 0.42$$

$$Z_i 6 = \frac{90 - 81.63}{8.04} = 1.04$$

$$Z_i 7 = \frac{95 - 81.63}{8.04} = 1.66$$

b. Finding S(Z_i)

$$S(Z_i) = \frac{F_{Kum}}{N}$$

$$\frac{2}{40} = 0.05$$

$$\frac{4}{40} = 0.1$$

$$\frac{8}{40} = 0.2$$

$$\frac{10}{40} = 0.25$$

$$\frac{20}{40} = 0.5$$

$$\frac{32}{40} = 0.8$$

$$\frac{37}{40} = 0.93$$

$$\frac{40}{40} = 1$$

From the table above, it can be seen that Liliefors observation or L_o = - 0.0265 with n = 40 and at real level α= 0.05 from the list of critical value of

Liliefors table $L_t = 0.14$. It is known that the coefficient of $L_o (-0.0265) < L_t$ (0.14). So it can be concluded that the data distribution of the students' ability in reading comprehension is **normal**.

A.2.2. Normality Testing of Control Group

Table XII
Frequency Distribution of Pre Test in Control Group

NO	X_i	F_i	$F_i X_i$	X_i^2	$F_i X_i^2$
1	50	2	100	2500	5000
2	55	2	110	3025	6050
3	60	7	420	3600	25200
4	65	8	520	4225	33800
5	70	8	560	4900	39200
6	75	6	450	5625	33750
7	80	7	560	6400	44800
Total		40	2720	30275	187800

Based on the data above, the result of $F_i X_i^2$ is 187800 and $F_i X_i$ is 2720. Then the following is the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{x} = \frac{\sum F_i X_i}{\sum F_i}$$

Where:

\bar{x} = Mean of variable x

$\sum F_i X_i$ = Total number of score

$\sum F_i$ = Number of sample

So,

$$\bar{x} = \frac{\sum F_i X_i}{\sum F_i}$$

$$= \frac{2720}{40}$$

$$= 68$$

b. Variant

Where:

$$S^2 = \text{Variant}$$

$$N = \text{Number of sample}$$

So,

$$\begin{aligned} S^2 &= \frac{n\sum F_i X_i^2 - (\sum F_i X_i)^2}{n(n-1)} \\ &= \frac{40 \times 187800 - (2720)^2}{40(40-1)} \\ &= \frac{7512000 - 7398400}{40(39)} \\ &= \frac{113600}{1560} \\ &= 72.82 \end{aligned}$$

c. Standard Deviation

$$\begin{aligned} S &= \sqrt{S^2} \\ &= \sqrt{72.82} \\ &= 8.53 \end{aligned}$$

After getting the calculation of mean, variant and deviation standard, then the next step is to find out the normality of the test. It means that the test was given to the students was observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table XIII
Normality Testing of Pre Test in Control Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	50	-2.11	0.0174	0.05	-0.0326
2	50	-2.11	0.0174	0.05	-0.0326
3	55	-1.52	0.0643	0.1	-0.0357
4	55	-1.52	0.0643	0.1	-0.0357
5	60	-0.94	0.1736	0.275	-0.1014
6	60	-0.94	0.1736	0.275	-0.1014
7	60	-0.94	0.1736	0.275	-0.1014
8	60	-0.94	0.1736	0.275	-0.1014
9	60	-0.94	0.1736	0.275	-0.1014
10	60	-0.94	0.1736	0.275	-0.1014
11	60	-0.94	0.1736	0.275	-0.1014
12	65	-0.35	0.3632	0.475	-0.1118
13	65	-0.35	0.3632	0.475	-0.1118
14	65	-0.35	0.3632	0.475	-0.1118
15	65	-0.35	0.3632	0.475	-0.1118
16	65	-0.35	0.3632	0.475	-0.1118
17	65	-0.35	0.3632	0.475	-0.1118
18	65	-0.35	0.3632	0.475	-0.1118
19	65	-0.35	0.3632	0.475	-0.1118
20	70	0.23	0.591	0.675	-0.084
21	70	0.23	0.591	0.675	-0.084
22	70	0.23	0.591	0.675	-0.084
23	70	0.23	0.591	0.675	-0.084
24	70	0.23	0.591	0.675	-0.084
25	70	0.23	0.591	0.675	-0.084
26	70	0.23	0.591	0.675	-0.084
27	70	0.23	0.591	0.675	-0.084
28	75	0.82	0.7939	0.825	-0.0311
29	75	0.82	0.7939	0.825	-0.0311
30	75	0.82	0.7939	0.825	-0.0311
31	75	0.82	0.7939	0.825	-0.0311

No	Score	Zi	F(Zi)	S(Zi)	F(Zi)- S(Zi)
32	75	0.82	0.7939	0.825	-0.0311
33	75	0.82	0.7939	0.825	-0.0311
34	80	1.41	0.9207	1	-0.0793
35	80	1.41	0.9207	1	-0.0793
36	80	1.41	0.9207	1	-0.0793
37	80	1.41	0.9207	1	-0.0793
38	80	1.41	0.9207	1	-0.0793
39	80	1.41	0.9207	1	-0.0793
40	80	1.41	0.9207	1	-0.0793
Total	2720	Lo = -0.084			
Mean	68	Lt = 0.14			

a. Finding Z score

$$\text{Formula: } Z_i = \frac{X_i - \bar{X}}{s}$$

$$Z_i 1 = \frac{50 - 68}{8.53} = -2.11$$

$$Z_i 2 = \frac{55 - 68}{8.53} = -1.52$$

$$Z_i 3 = \frac{60 - 68}{8.53} = -0.94$$

$$Z_i 4 = \frac{65 - 68}{8.53} = -0.35$$

$$Z_i 5 = \frac{70 - 68}{8.53} = 0.23$$

$$Z_i 6 = \frac{75 - 68}{8.53} = 0.82$$

$$Z_i 7 = \frac{80 - 68}{8.53} = 1.41$$

b. Finding S(Zi)

$$S(Z_i) = \frac{F_{Kum}}{N}$$

$$\frac{2}{40} = 0.05$$

$$\frac{4}{40} = 0.1$$

$$\frac{11}{40} = 0.275$$

$$\frac{19}{40} = 0.475$$

$$\frac{27}{40} = 0.675$$

$$\frac{33}{40} = 0.825$$

$$\frac{40}{40} = 1$$

From the table above, it can be seen that Liliefors observation or $L_o = -0.084$ with $n = 40$ and at real level $\alpha = 0.05$ from the list of critical value of Liliefors table $L_t = 0.14$. It is known that the coefficient of $L_o (-0.084) < L_t (0.14)$. So it can be concluded that the data distribution of the students' ability in reading comprehension is **normal**.

Table XIV
Frequency Distribution of Post Test in Control Group

NO	Xi	Fi	FiXi	Xi ²	FiXi ²
1	55	1	55	3025	3025
2	60	1	60	3720	3720
3	65	3	195	4225	12675
4	70	6	420	4900	29400
5	75	11	825	5625	61875
6	80	8	640	6400	51200
7	85	10	850	7225	72250
Total		40	3045	35120	234145

Based on the data above, the result of $\sum F_i X_i^2$ is 234145 and $\sum F_i X_i$ is 3045.

Then the following is the calculation of mean, variant and standard deviation.

a. Mean

$$\bar{x} = \frac{\sum F_i X_i}{\sum F_i}$$

Where:

$$\bar{x} = \text{Mean of variable } x$$

$$\sum F_i X_i = \text{Total number of score}$$

$$\sum F_i = \text{Number of sample}$$

So,

$$\bar{x} = \frac{\sum F_i X_i}{\sum F_i}$$

$$= \frac{3045}{40}$$

$$= 76.125$$

b. Variant

Where:

$$S^2 = \text{Variant}$$

$$N = \text{Number of sample}$$

So,

$$S^2 = \frac{n \sum F_i X_i^2 - (\sum F_i X_i)^2}{n(n-1)}$$

$$= \frac{40 \times 234145 - (3045)^2}{40(40-1)}$$

$$= \frac{9365800 - 9272025}{40(39)}$$

$$= \frac{93.775}{1560}$$

$$= 60.11$$

c. Standard Deviation

$$S = \sqrt{S^2}$$

$$= \sqrt{60.11}$$

$$= 7.75$$

After getting the calculation of mean, variant and deviation standard, then the next step is to find out the normality of the test. It means that the test was given to the students was observed by Liliefors test. The calculation of normality reading comprehension can be seen in the following table:

Table XV
Normality Testing of Post Test in Control Group

No	Score	Zi	F(Zi)	S(Zi)	F(Zi) - S(Zi)
1	55	-2.73	0.0032	0.025	-0.0218
2	60	-2.08	0.0188	0.05	-0.0312
3	65	-1.44	0.0749	0.125	-0.0501
4	65	-1.44	0.0749	0.125	-0.0501
5	65	-1.44	0.0749	0.125	-0.0501
6	70	-0.79	0.2148	0.275	-0.0602
7	70	-0.79	0.2148	0.275	-0.0602
8	70	-0.79	0.2148	0.275	-0.0602
9	70	-0.79	0.2148	0.275	-0.0602
10	70	-0.79	0.2148	0.275	-0.0602
11	70	-0.79	0.2148	0.275	-0.0602
12	75	-0.15	0.4404	0.55	-0.1096
13	75	-0.15	0.4404	0.55	-0.1096
14	75	-0.15	0.4404	0.55	-0.1096
15	75	-0.15	0.4404	0.55	-0.1096
16	75	-0.15	0.4404	0.55	-0.1096
No	Score	Zi	F(Zi)	S(Zi)	F(Zi)- S(Zi)
17	75	-0.15	0.4404	0.55	-0.1096

18	75	-0.15	0.4404	0.55	-0.1096
19	75	-0.15	0.4404	0.55	-0.1096
20	75	-0.15	0.4404	0.55	-0.1096
21	75	-0.15	0.4404	0.55	-0.1096
22	75	-0.15	0.4404	0.55	-0.1096
23	80	0.5	0.6915	0.75	-0.0585
24	80	0.5	0.6915	0.75	-0.0585
25	80	0.5	0.6915	0.75	-0.0585
26	80	0.5	0.6915	0.75	-0.0585
27	80	0.5	0.6915	0.75	-0.0585
28	80	0.5	0.6915	0.75	-0.0585
29	80	0.5	0.6915	0.75	-0.0585
30	80	0.5	0.6915	0.75	-0.0585
31	85	1.15	0.8749	1	-0.1251
32	85	1.15	0.8749	1	-0.1251
33	85	1.15	0.8749	1	-0.1251
34	85	1.15	0.8749	1	-0.1251
35	85	1.15	0.8749	1	-0.1251
36	85	1.15	0.8749	1	-0.1251
37	85	1.15	0.8749	1	-0.1251
38	85	1.15	0.8749	1	-0.1251
39	85	1.15	0.8749	1	-0.1251
40	85	1.15	0.8749	1	-0.1251
Total	3045	Lo = -0.0218			
Mean	76.125	Lt = 0.14			

a. Finding Z score

$$\text{Formula: } Z_i = \frac{X_i - \bar{X}}{s}$$

$$Z_i 1 = \frac{55 - 76.125}{7.75} = -2.73$$

$$Z_i 2 = \frac{60 - 76.125}{7.75} = -2.08$$

$$Z_i 3 = \frac{65 - 76.125}{7.75} = -1.44$$

$$Z_i 4 = \frac{70 - 76.125}{7.75} = -0.79$$

$$Z_i 5 = \frac{75 - 76.125}{7.75} = -0.15$$

$$Z_i 6 = \frac{80 - 76.125}{7.75} = 0.5$$

$$Z_i 7 = \frac{85 - 76.125}{7.75} = 1.15$$

b. Finding $S(Z_i)$

$$S(Z_i) = \frac{F_{Kum}}{N}$$

$$\frac{1}{40} = 0.025$$

$$\frac{2}{40} = 0.05$$

$$\frac{5}{40} = 0.125$$

$$\frac{11}{40} = 0.275$$

$$\frac{22}{40} = 0.55$$

$$\frac{30}{40} = 0.75$$

$$\frac{40}{40} = 1$$

From the table above, it can be seen that Liliefors observation or $L_o = -0.0218$ with $n = 40$ and at real level $\alpha = 0.05$ from the list of critical value of Liliefors table $L_t = 0.14$. It is known that the coefficient of $L_o (-0.0218) < L_t$

(0.14). So it can be concluded that the data distribution of the student's ability in reading comprehension is **normal**.

A.3. Homogeneity Testing

A.3.1. Homogeneity Testing of Pre Test

$$\begin{aligned}
 F &= \frac{\text{Highest varians}}{\text{lowest varians}} \\
 &= \frac{106.39}{72.82} \\
 &= 1.46
 \end{aligned}$$

Then the coefficient of $F_{\text{obs}} = 1.46$ is compared with F_{table} , where F_{table} was determined at real level $\alpha = 0.05$ and the numerator $df = N = 40$ and the denominator $dk = 40$. So, by using the list of critical value at F distribution was found $F_{0.05(40,40)} = 1.69$

So $F_{\text{obs}} < F_{\text{table}}$ atau $(1.46 < 1.69)$ so it can be concluded that the variant from the data was homogenous.

A.3.2. Homogeneity Testing of Post Test

$$\begin{aligned}
 F &= \frac{\text{Highest varians}}{\text{lowest varians}} \\
 &= \frac{64.60}{60.11} \\
 &= 1.07
 \end{aligned}$$

Then the coefficient of $F_{\text{obs}} = 1.07$ was compared with F_{table} , where F_{table} is determined at real level $\alpha = 0.05$ and the numerator $df = N = 40$ and the denominator $dk = 40$. So, by using the list of critical value at F distribution was found $F_{0.05(40,40)} = 1.69$

So $F_{obs} < F_{table}$ atau ($1.07 < 1.69$) so it can be concluded that the variant from the data is homogenous.

A.4. Hypothesis Testing

Table XVI
Mean of Post-Test – Pre-Test in Experimental Group

No	Score Post-Test	Score Pre-Test	Decrease
1	85	70	15
2	95	90	5
3	85	70	15
4	90	80	10
5	85	80	5
6	80	75	5
7	75	70	5
8	80	75	5
9	90	85	5
10	75	70	5
11	80	50	30
12	80	90	10
13	95	90	5
14	85	80	5
15	80	75	5
16	80	75	5
17	75	70	5
18	85	80	5
19	60	50	10
20	95	85	15
21	85	75	15
22	85	70	15
23	80	70	10
24	75	70	5

No	Score Post-Test	Score Pre-Test	Decrease
25	80	75	5
26	85	80	5
27	80	60	20
28	90	85	5
29	75	70	5
30	90	85	5
31	85	60	25
32	85	70	15
33	90	85	5
34	85	80	5
35	85	80	5
36	80	75	5
37	60	50	10
38	70	65	5
39	75	65	10
40	70	65	5
Σ			350
Mean			8.75

Table XVII
Mean of Post-Test – Pre-Test in Control Group

No	Score Post-Test	Score Pre-Test	Decrease
1	85	75	10
2	65	60	5
3	85	80	5
4	75	65	10
5	70	65	5
6	75	70	5
7	55	50	5
8	65	55	10
9	85	80	5
10	85	80	5

No	Score Post-Test	Score Pre-Test	Decrease
11	80	70	10
12	75	60	15
13	70	60	10
14	85	80	5
15	85	75	10
16	60	50	10
17	70	60	10
18	75	60	15
19	70	60	10
20	75	70	5
21	80	75	5
22	80	75	5
23	75	65	10
24	75	70	5
25	85	80	5
26	80	75	5
27	85	80	5
28	80	70	10
29	80	70	10
30	80	70	10
31	75	65	10
32	70	65	5
33	70	65	5
34	65	55	10
35	85	75	10
36	75	60	15
37	80	65	15
38	75	65	10
39	75	70	5
40	85	80	5
Σ			325
Mean			8.13

The hypothesis testing in this research, it is used two average similarity test by using statistic, as follow:

$$\begin{aligned}
 t &= \frac{Ma - Mb}{\sqrt{\left(\frac{da^2 + db^2}{Na + Nb - 2}\right)\left(\frac{1}{Na} + \frac{1}{Nb}\right)}} \\
 &= \frac{8.75 - 8.13}{\sqrt{\left(\frac{64.64 + 60.06}{40 + 40 - 2}\right)\left(\frac{1}{40} + \frac{1}{40}\right)}} \\
 &= \frac{0.62}{\sqrt{\left(\frac{124.7}{78}\right)(0.05)}} \\
 &= \frac{0.62}{\sqrt{(1.60)(0.05)}} \\
 &= \frac{0.62}{\sqrt{0.08}} \\
 &= \frac{0.62}{0.28} \\
 &= 2.21
 \end{aligned}$$

From the computation above, it can be seen that $t_{\text{observed}} = 2.21$. The testing hypothesis was conducted in order to find out whether that hypothesis is accepted or rejected. The basis of testing hypothesis is that the H_a is accepted if the $t_{\text{observed}} > t_{\text{table}}$. In this study the calculation of the scores uses t-test for the degree of freedom 78 ($df = N + N - 2$) at the level of significant 0.05 that the critical value is 1.994. So it can be seen that $t_{\text{table}} = 1.994$.

After the scores were calculated, it was found that in this study the t_{observed} is higher than the t_{table} . It can be seen as follow:

$$\begin{aligned}
 t_{\text{observed}} &> t_{\text{table}}(\alpha = 0.05) \text{ with df } 78 \\
 2.21 &> 1.994
 \end{aligned}$$

From the result above, it shows that the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. It means that reading by using words search strategy affect student's ability in reading comprehension.

A.5. Observation

The observer tried to notice all activities in the physical classroom activity. It might be about the researcher and students performances, class situation and students' response. After the teaching learning process finished, the reseacher was carried out the post test as to know how well the students' ability in reading comprehension.

From the observation sheet, the researcher found that some students active during teaching learning process, the situation of the class was good enough since the students paid their attention to the reseacher's explanation. However, in the first meeting the some students confused about the material that the researcher gave. After the further explanation that has been given by reseacher, students seem more understand about the subject of learning.

B. Discussion

There was a significant difference on students' ability in reading comprehension by using words search strategy. The students that were taught by Words Search Strategy have higher score than were taught by Teacher Centered strategy.

It was explained in Chapter II that a Word Search is a word game that is letters of a word in a grid, that usually has rectagular or square shape. The objective of this puzzle is to find and mark all the words hidden inside the box. The words may be horizontally, vertically or diagonally. Often a list of the hidden

words is provided, but more challenging puzzles may let the player figure them out. Many word search puzzles have a theme to which all the hidden words are related. Games also will encourage and motivate students to learn in order to make the learning process fun and exciting. Games are an effective way of giving meaning, motivating, atmosphere that relaxes and gives students the chance to develop their skill and language skill.

From the calculation above it found that $t_{\text{observed}} = 2.21$ whereas the $t_{\text{table}} = 1.994$. It shows that students' ability in reading comprehension was significant at 0.05. From the result, the researcher found that there was significant of the students' ability in reading comprehension by using Words Search Strategy. This means that the students' ability in reading comprehension that were taught by WordsSearch Strategy was better than taught by Teacher Centered Strategy.

CHAPTER V

CLOSING

A. Conclusion

In the final Part, the researcher give the conclusion as follow:

Words search strategy is significant to be used in affecting the students' ability in reading comprehension. The result of t_{observed} is 2.21 and t_{table} is 1.994 ($t_{\text{observed}} > t_{\text{table}}$, $2.21 > 1.994$). It means that H_0 is rejected and H_a is accepted. There is a significant effect of words search strategy on the students' ability in reading comprehension.

B. Recommendation

Based on the conclusion above, the researcher gives some recommendations as follows:

1. English teachers are recommended to use words search strategy in their teaching learning process in order to affect the students' ability in reading comprehension.
2. The researchers who are interested in doing a research related to this study should try to apply words search strategy on different level of learners through different genre to prove the effectiveness of words search strategy on students' ability in reading comprehension.

Finally, the researcher considers that this study still need validity from the next researcher that has the similar topic with this study.

C. Implication

Implications are drawn from the research finding. The research came with a finding that there is a significant difference on the students' ability in reading comprehension between students who are taught without using words search strategy and those who are taught without using words search strategy. Moreover, this research implies that the use of words search strategy is needed in teaching reading.

Considering the conclusion drawn above, it implies that the use of Words Search Strategy is capable to promote the improvement of students' reading skill in which it can be seen from the progress of the students' reading scores after given treatment using words search strategy. It is expected that the English teachers are highly recommended to utilize communicative words search strategy on the teaching of reading comprehension in order to affect students' ability in reading comprehension.

Students are motivated and relaxed in learning reading process when they are taught using Words Search Strategy. Therefore, it implies that the use of Words Search Strategy can keep students' interest and help them to understand the meaning of the text in the easier way.

In summary, the use of Words Search Strategy during the research can affect the students' ability in reading comprehension. Therefore, the application of Words Search Strategy needs to be applied continuously in teaching reading. It is because the use of Words Search Strategy can be

effective strategy to help the students practice reading and create an enthusiastic learning process so that the standard of competence of learning process can be achieved.

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Appendix I

LESSON PLAN (EXPERIMENTAL GROUP)

School : MTs Al-Jam'iyatul Wasliyah Tembung

Subject : Reading skill

Class/Semester : VIII-5/2

Time Allocation : 2 x 40 Minutes

I. Standard Competency

Understanding the meaning of short functional text and essay in a form of recount and narrative accurately and accepted in context of daily life.

II. Basic Competence

Responding the meaning of short functional text accurately, fluently and accepted to interact in context of daily life.

III. Indicators

1. To identify topics of the text that has been read
2. To identifying certain information of short functional text
3. To explain main idea of the text
4. Answer the question

IV. Teaching Objective

1. The students can identify topics of the text that has been read
2. The students can identifying certain information of short functional text
3. Students can explain main idea of the text
4. Students can answer the question

V. Character goals : Trusworthiness

Respect

Diligence

VI. Strategy of Teaching

Words Search Strategy

VII. Procedure of Teaching

- a. Introduction
 1. Greeting the students
 2. Check the list of attendance
 3. Start the lesson with praying
 4. Teacher gives motivation to the students
 5. Teacher does apperception by asking students about the reading that ever read
- b. Core Activity
 1. Teacher explains about the strategy that will be used
 2. Teacher writes some difficult words
 3. Teacher makes the words search puzzle in the white board
 4. All students search the vocabularies by their own and find the meaning
 5. Teacher guide students to pronounce the vocabularies
- c. Closing
 1. Teacher circulates and make notes of any problems they have with parts of words search
 2. Teacher asks students about the difficulty of material
 3. Teacher gives opportunity to students for asking question
 4. Teacher answer the question from students
 5. The teacher makes conclusion of the material
 6. Teacher reminds the students to do self-study at home
 7. Teacher motivates the students to study harder
 8. Teacher close the learning process

VIII. Source/tool/media

Source : text from the internet

Media : words search puzzle, copies of reading test items, whiteboard, boardmarker

IX. Evaluation

- a. Technique : Written
- b. Form of instrument : Multiple Choices
- c. Example of instrument : Choose the best answer by crossing (x) a,b,c, or d!
- d. Direction of evaluation:

1. Every correct answer : 5
2. Maximum scores : 100

$$X = \frac{\sum x}{N} \times 100\%$$

Where : X = The mean of students' score

$\sum x$ = The total score

N = The number of the students

Medan, 12 May 2018

English Teacher

Researcher

Evi Hastuti Harahap, SS

Aida Saputri Nst
34.14.3.021

Approved by
Head Master of MTs Al-Jam'iyatul Wasliyah Tembung

Muhammad Yunus, S.Ag

Appendix II

LESSON PLAN (CONTROL GROUP)

School : MTs Al-Jam'iyatul Wasliyah Tembung

Subject : Reading skill

Class/Semester : VIII-3/2

Time Allocation : 2 x 40 Minutes

X. Standard Competency

Understanding the meaning of short functional text and essay in a form of recount and narrative accurately and accepted in context of daily life.

XI. Basic Competence

Responding the meaning of short functional text accurately, fluently and accepted to interact in context of daily life.

XII. Indicators

5. To identify topics of the text that has been read
6. To identifying certain information of short functional text
7. To explain main idea of the text
8. Answer the question

XIII. Teaching Objective

5. The students can identify topics of the text that has been read
6. The students can identifying certain information of short functional text
7. Students can explain main idea of the text
8. Students can answer the question

XIV. Character goals : Trusworthiness

Respect

Diligence

XV.Strategy of Teaching

Teacher Centered Strategy

XVI. Procedure of Teaching

- d. Introduction
 - 6. Greeting the students
 - 7. Check the list of attendance
 - 8. Start the lesson with praying
 - 9. Teacher gives motivation to the students
 - 10. Teacher does apperception by asking students about the reading that ever read
- e. Core Activity
 - 6. Teacher explains about the strategy that will be used
 - 7. Teacher writes some difficult words
 - 8. Teacher asks students to find the words and find the meaning of the difficult words in the dictionary
 - 9. The teacher guides the students to pronounce all words
- f. Closing
 - 9. Teacher circulates and make notes of any problems they have with parts of words search
 - 10. Teacher asks students about the difficulty of material
 - 11. Teacher gives opportunity to students for asking question
 - 12. Teacher answer the question from students
 - 13. The teacher makes conclusion of the material
 - 14. Teacher reminds the students to do self-study at home
 - 15. Teacher motivates the students to study harder
 - 16. Teacher close the learning process

XVII. Source/tool/media

Source : text from the internet

Media : copies of reading test items, whiteboard, boardmarker

XVIII. Evaluation

- e. Technique : Written
- f. Form of instrument : Multiple Choices
- g. Example of instrument : Choose the best answer by crossing (x) a,b,c, or d!
- h. Direction of evaluation:

3. Every correct answer : 5
4. Maximum scores : 100

$$X = \frac{\sum x}{N} \times 100\%$$

Where : X = The mean of students' score

$\sum x$ = The total score

N = The number of the students

Medan, 12 May 2018

English Teacher

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34.14.3.021

Approved by
Head Master of MTs Al-Jam'iyatul Wasliyah Tembung

Muhammad Yunus, S.Ag

APPENDIX III

PRE TEST

TEXT 1

SUSI SUSANTI

Susi Susanti was born in Tasik Malaya in 1972. When she was a child, her father often took her to the badminton court, which he owned. At first, she only played around the court running and collecting shuttlecocks. Later on her father asked Susi if she wanted to play badminton properly.

1. When did susi Susanti born? She was born in.....
 a. 1974 b. 1984 c. 1982 d. 1972
2. Where was susi Susanti born? She was born in
 a. Bandung b. Tasik Malaya c. Sumedang d. Indramayu
3. Who took Susi Susanti to Badminton court?
 a. her mother b. her father c. her brother d. her sister
4. Susi Susanti is aof the Badminton championship.
 a. winner b. supporter c. presenter d. referee
5. Situation: Sandy's father is bringing his racket.
 Sandy : Excuse me! Could I bring your racket?
 Father :
 a. fine thanks b. you are welcome c. yes, please d. just fine

TEXT 2

Mrs. Hartono always takes the children shopping before school. Her son, Seno is a MI student. Her daughter, Sinta, is a MTs student. She wants to buy red shorts and a white shirt for Seno. She also wants to buy a blue skirt and a white shirt for Sinta.

6. "She wants to buy red shorts". The underlined word refers to
 a. Mrs. Hartono b. Seno c. Sinta d. Mr.Hartono
7. What does Mrs. Hartono want to buy for Sinta?
 a. school uniform b. white t-shirt c. long dress d. blue skirt and white shirt

TEXT 3

GOING TO THE ZOO

Sinta's class is going to visit the zoo next Saturday. In the town there is a big zoo with lots of animals. There are some beautiful tigers and two old lions. Lions and tigers are fierce animals. They live in strong cages. They eat a lot of meat every day.

8. There are some beautiful tigers andold lions.

- a. 1 b. 2 c. 3 d. 4

9. Where the tiger and two old lions live?

- a. hospital b. strong cages c. school d. in the restaurant

10. What do they eat everyday?

- a. rice b. bread c. meat d. cake

TEXT 4

Let us see the map of Asia. We will find a group of islands. The islands lie on the south of Malaysia and form a link between Asia and Australia. These islands form the Indonesian archipelago.

11. Indonesia lies between

- a. Asia and Africa b. Asia and Europe c. Asia and America d. Asia and Australia

12. Indonesia lies to the south of

- a. Philippine b. Singapore c. Malaysia d. Thailand

13. What do those islands form?

- a. Philippine b. Malaysia c. Indonesian archipelago d. Thailand

TEXT 5

Mirzam : Hello, my name is Mirzam.

Rahman : Hi, I'm Rahman. I'm in class 3A

Mirzam : I'm in 3B. I live in Cirahayu. It's near our school. Where do you live?

Rahman : I live at jl. Olesed no. 17

Mirzam : Rahman, this is Fitri. She is my classmate.

Fitri : Hello, Rahman. I'm from Lebakwangi

Rahman : Nice to meet you.

Fitri : Nice to meet you, too.

14. How many persons are there in the dialogue?

- a. two b. three c. one d. four

15. Who introduces Fitri?

- a. Rahman does b. Fitri herself does c. Mirzam does d. Fitri and Rahman

16. Who come from Lebakwangi?

- a. Dina b. Rahman c. Fitri d. Mirzam

17. Who is Fitri? She is

- a. Mirzam's roommate c. Mirzam's classmate
b. Rahman's classmate d. Rahman's roommate

TEXT 6

Erni is a grade the student of SLTP. Her school is large. It has many classrooms, a school yard, a school garden, a library, and a big mosque. She is in class 3C. Her classroom is pretty and lovely. There are twenty-two boy and eighteen girls in it. Erni is a very friendly girl. She makes a lot of friends. Her classmates like her very much. Her neighbor is Ida. She is beside her. She also likes Erni. Now, they are studying English.

18. How many boys are there in Erni's class? There are ... boys.

- a. twenty-two b. many c. eighteen d. twenty

19. Erni is

- a. very friendly girl b. a pretty girl c. very naughty girl d. very naughty girl

20. Erni is a very friendly girl. Her classmate like her very much her neighbor is Ida. She sits beside her. The underlined word refers to

- a. Ida b. Erni c. friend d. classmate

APPENDIX IV

POST TEST

TEXT 1

SUSI SUSANTI

Susi Susanti was born in Tasik Malaya in 1972. When she was a child, her father often took her to the badminton court, which he owned. At first, she only played around the court running and collecting shuttlecocks. Later on her father asked Susi if she wanted to play badminton properly.

1. When did susi Susanti born? She was born in.....
a.1974 b. 1984 c. 1982 d. 1972
2. Where was susi Susanti born? She was born in
a. Bandung b. Tasik Malaya c. Sumedang d. Indramayu
3. Who took Susi Susanti to Badminton court?
a. her mother b. her father c. her brother d. her sister
4. Susi Susanti is aof the Badminton championship.
a. winner b. supporter c. presenter d. referee
5. Situation: Sandy's father is bringing his racket.
Sandy : Excuse me! Could I bring your racket?
Father :
b. fine thanks b. you are welcome c. yes, please d. just fine

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7. What does Mrs. Hartono want to buy for Sinta?
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GOING TO THE ZOO

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12. Indonesia lies to the south of

- a. Philippine b. Singapore c. Malaysia d. Thailand

13. What do those islands form?

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TEXT 5

Mirzam : Hello, my name is Mirzam.

Rahman : Hi, I'm Rahman. I'm in class 3A

Mirzam : I'm in 3B. I live in Cirahayu. It's near our school. Where do you live?

Rahman : I live at jl. Olesed no. 17

Mirzam : Rahman, this is Fitri. She is my classmate.

Fitri : Hello, Rahman. I'm from Lebakwangi

Rahman : Nice to meet you.

Fitri : Nice to meet you, too.

14. How many persons are there in the dialogue?

- a. two b. three c. one d. four

15. Who introduces Fitri?

- a. Rahman does b. Fitri herself does c. Mirzam does d. Fitri and Rahman

16. Who come from Lebakwangi?

- a. Dina b. Rahman c. Fitri d. Mirzam

17. Who is Fitri? She is

- a. Mirzam's roommate c. Mirzam's classmate
b. Rahman's classmate d. Rahman's roommate

TEXT 6

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18. How many boys are there in Erni's class? There are ... boys.

- a. twenty-two b. many c. eighteen d. twenty

19. Erni is

- a. very friendly girl b. a pretty girl c. very naughty girl d. very naughty girl

20. Erni is a very friendly girl. Her classmate like her very much her neighbor is Ida. She sits beside her. The underlined word refers to

- a. Ida b. Erni c. friend d. classmate

APPENDIX V**KEY ANSWER OF PRE TEST AND POST TEST**

1. D	6. A	11. D	16. C
2. B	7. D	12. C	17. A
3. B	8. B	13. C	18. A
4. A	9. B	14. B	19. A
5. C	10. C	15. B	20. A

Appendix VI

STUDENTS' OBSERVATION SHEET

No	Activities	Score			
		1	2	3	4
1	The students' attitude in learning and teaching process				
2	The students' enthusiastic in learning and teaching process				
3	The students work individually in doing their task				
4	The students' activeness in learning and teaching process				
5	The students comprehend the lesson in learning and teaching process				
6	The students answer the question from the teacher				
7	The students response to the topic given				
8	All the students do their task				
Score					
Total					
Percentage					

Note: Score 1= bad, Score 2 = enough, Score 3 = good, Score 4 = very good

$$\text{Percentage} = \frac{\text{total score}}{\text{jumlah activities}}$$

Medan, 12 May 2018

Observer

Evi Hastuti Harahap, SS

Appendix VII

TEACHER'S OBSERVATION SHEET

NO	Activities	Score			
		1	2	3	4
1	Explanation the material by the teacher				
2	The teacher's pronunciation in teaching the material				
3	The teacher's intonation in teaching the material				
4	The teacher's grammar in teaching the material				
5	The using of media by the teacher				
6	The teacher chooses the right media with the material				
7	Students are helped to understand the material easier by media				
8	Spirit and enthusiastic of the teacher in teaching				
9	The teacher manages the time effectively and efficiently				
10	The teacher asks question to the students				
11	The teacher concludes the lesson				
Score					
Total					
Percentage					

Note: Score 1= bad, Score 2 = enough, Score 3 = good, Score 4 = very good

$$\text{Percentage} = \frac{\text{total score}}{\text{jumlah activities}}$$

Medan, 12 May 2018

Observer

Evi Hastuti Harahap, SS

APPENDIX VIII

STUDENTS' INITIAL AND REAL NAME

OF EXPERIMENTAL GROUP (VIII-5)

No.	Initial Name	Real Name
1	AP	Adinda Putri
2	AS	Alifa Suhaila
3	AA	Ameli Amanda
4	ASP	Annisa Salsabila Purba
5	EDFD	Erra Dwi Farra Diva
6	FB	Fadiyah Bilqis
7	HRP	Hilda Rahima Purwadi
8	IS	Icut Silfanni
9	IS	Indah Syahfitri
10	JASN	Jelita Ananda Sari Nst
11	J	Julistia
12	JH	Juniyanti Hasibuan
13	KS	Khairunnisa Sahir
14	M	Masytha
15	MS	Mutiah Syahidah
16	MHS	Muhaini Humairah Simbolon
17	NS	Nadiah Syafira
18	NIL	Nadira Ilmi Lubis
19	NF	Nayla Fidiananta
20	N	Nazmi
21	NS	Nawa Sabila
22	NSN	Nila Sari Nst
23	NHR	Nur Halizah Reuter
24	NHL	Nur Hidayah Lubis
25	RAH	Rabiatul Adawiyah Hsb
26	RSL	Rahma Sari Lbs
27	RO	Redina Olivia

No	Initial Name	Real Name
28	RNS	Retno Naqiyah Sahla
29	RWH	Risky Wirdatul Husna
30	RAS	Rismayu Ayu Shakilla
31	RAN	Robiyatul Adawiyah Nst
32	SS	Sartika Siregar
33	SNS	Siti Nurliana Srg
34	SR	Siti Rahma
35	SZB	Shopiah Zahra Batubara
36	SW	Sri Wahyuni
37	SR	Syahfitri Rahma
38	TR	Tiwi Rahayu
39	UDP	Ulfa Dwi Pramitha
40	ZIP	Zahra Ica Praselia

APPENDIX IX

STUDENTS' INITIAL AND REAL NAME OF
CONTROL GROUP (VIII-3)

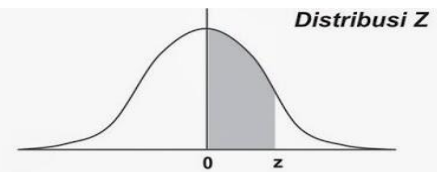
No.	Initial Name	Real Name
1	AM	Afriani Mulia
2	AYL	Afrida Yanti Lbs
3	AS	Aina Salsabila
4	ASR	Aisyah Saskia Rangkuti
5	AZ	Ainaya Zahwa
6	AD	Anggi Dirgahayu
7	ADKS	Anggi Dwi Kiarani Srg
8	AAS	Azizah Asma Siregar
9	CMN	Carissa Mumtaza Nst
10	DA	Dea Ariesta
11	DA	Della Aldama
12	DA	Dessy Anggraini
13	DW	Dinda Wulandari
14	EA	Erika Aulia
15	E	Ernawati
16	FZH	Fadhila Zahra Hsb
17	FK	Fatimatuzzahro Kholik
18	HSS	Husna Salsabila Siregar
19	LM	Lailatul Mufidah
20	MAL	Miftah Awaliyah Lubis
21	NN	Nabila Nst
22	NN	Nadia Najah
23	NF	Nadya Firnanda
24	NIS	Neysa Iskandar Srg
25	NRM	Nur Rahmadhani Meutia
26	RSN	Ramida Safitri Nst
27	RY	Rina Yunita

No	Initial Name	Real Name
28	SA	Sabila Azmi
29	S	Salsabila
30	S	Saputri
31	SK	Sekar Khairani
32	SRAH	Shafa Rasmi Amini Hrp
33	SA	Silvi Anggraini
34	SK	Siti Khodijah
35	SLB	Siti Lailatul Badriah
36	S	Surianti
37	SDYL	Syakila Dwi Yanti Lbs
38	ST	Syindi Triayustia
39	TSS	Tiara Sabila Srg
40	YAD	Yunisa Aulia Daulay

APPENDIX X

TABLE DSTRIBUTION NORMAL BAKU 0-Z

Kumulatif sebaran frekuensi normal
(Area di bawah kurva normal baku dari 0 sampai z)



Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990
3.1	0.4990	0.4991	0.4991	0.4991	0.4992	0.4992	0.4992	0.4992	0.4993	0.4993
3.2	0.4993	0.4993	0.4994	0.4994	0.4994	0.4994	0.4994	0.4995	0.4995	0.4995
3.3	0.4995	0.4995	0.4995	0.4996	0.4996	0.4996	0.4996	0.4996	0.4996	0.4997
3.4	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4997	0.4998
3.5	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998	0.4998
3.6	0.4998	0.4998	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.7	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.8	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999	0.4999
3.9	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000

Dipergunakan untuk kepentingan Praktikum dan Kuliah Statistika Agrotek cit. Ade

Source : <http://jam-statistic.blogspot.co.id/2014/04/cara-menentukan-nilai-alpha-dengan.html>

APPENDIX XI

THE CRITICAL VALUE LILIEFORS TEST

Ukuran Sampel	Taraf Nyata (α)				
	0,01	0,05	0,10	0,15	0,20
n = 4	0,417	0,381	0,352	0,319	0,300
5	0,405	0,337	0,315	0,299	0,285
6	0,364	0,319	0,294	0,277	0,265
7	0,348	0,300	0,276	0,258	0,247
8	0,331	0,285	0,261	0,244	0,233
9	0,311	0,271	0,249	0,233	0,223
10	0,294	0,258	0,239	0,022	0,215
11	0,284	0,249	0,230	0,217	0,206
12	0,275	0,242	0,223	0,212	0,199
13	0,268	0,234	0,214	0,202	0,190
14	0,261	0,227	0,207	0,194	0,183
15	0,257	0,220	0,201	0,187	0,177
16	0,250	0,213	0,195	0,182	0,173
17	0,245	0,206	0,189	0,177	0,169
18	0,239	0,200	0,184	0,173	0,166
19	0,235	0,195	0,179	0,169	0,163
20	0,231	0,190	0,174	0,166	0,160
25	0,200	0,173	0,158	0,147	0,142
30	0,187	0,161	0,144	0,136	0,131
n > 30	$\frac{1,031}{\sqrt{n}}$	$\frac{0,886}{\sqrt{n}}$	$\frac{0,805}{\sqrt{n}}$	$\frac{0,768}{\sqrt{n}}$	$\frac{0,736}{\sqrt{n}}$

APPENDIX XII

TABLE OF DISTRIBUTION

(Bilangan Dalam Badan Daftar Menyatakan:

Fp : Baris Atas untuk $p = 0,05$ dan Baris Bawah untuk $p = 0,01$)

$V_2 = \text{dk penyebut}$	$V_1 = \text{dk pembilang}$																											
	1	2	3	4	5	6	7	8	9	10	11	12	14	16	20	24	30	40	50	75	100	200	500	∞				
1	161	200	216	225	230	234	237	239	241	242	243	244	245	246	248	249	250	251	252	253	253	254	254	254	254	254	254	254
2	4062	4999	5403	5625	5764	5859	5928	5981	6022	6056	6082	6106	6142	6169	6208	6234	6258	6286	6302	6323	6334	6352	6361	6366	6366	6366	6366	6366
3	18,51	19,00	19,16	19,25	19,30	19,33	19,36	19,37	19,38	19,39	19,40	19,41	19,42	19,43	19,44	19,45	19,46	19,47	19,47	19,48	19,49	19,49	19,49	19,50	19,50	19,50	19,50	19,50
4	98,49	99,01	99,17	99,25	99,30	99,33	99,34	99,36	99,38	99,40	99,41	99,42	99,43	99,44	99,45	99,46	99,47	99,48	99,48	99,49	99,49	99,49	99,50	99,50	99,50	99,50	99,50	99,50
5	10,13	9,55	9,28	9,12	9,01	8,94	8,88	8,84	8,81	8,78	8,76	8,74	8,71	8,69	8,66	8,64	8,62	8,60	8,58	8,57	8,56	8,54	8,54	8,54	8,52	8,52	8,52	8,52
6	34,12	30,81	29,46	28,71	28,24	27,91	27,67	27,49	27,34	27,23	27,13	27,05	26,92	26,83	26,69	26,60	26,50	26,41	26,30	26,27	26,23	26,18	26,14	26,14	26,12	26,12	26,12	26,12
7	7,17	6,94	6,59	6,39	6,26	6,16	6,09	6,04	6,00	5,96	5,93	5,91	5,87	5,84	5,80	5,77	5,74	5,71	5,70	5,68	5,66	5,65	5,64	5,64	5,63	5,63	5,63	5,63
8	21,20	18,00	16,69	15,98	15,52	15,21	14,98	14,80	14,66	14,54	14,45	14,37	14,24	14,15	14,02	13,93	13,83	13,74	13,69	13,61	13,57	13,52	13,48	13,46	13,46	13,46	13,46	13,46
9	6,61	5,79	5,41	5,19	5,05	4,95	4,88	4,82	4,78	4,74	4,70	4,68	4,64	4,60	4,56	4,53	4,50	4,46	4,44	4,42	4,40	4,38	4,37	4,36	4,36	4,36	4,36	4,36
10	16,26	13,27	12,06	11,39	10,97	10,67	10,45	10,27	10,15	10,05	9,96	9,89	9,77	9,66	9,55	9,47	9,38	9,29	9,24	9,17	9,13	9,07	9,04	9,02	9,02	9,02	9,02	9,02
11	5,99	5,14	4,76	4,53	4,39	4,28	4,21	4,15	4,10	4,06	4,03	4,00	3,96	3,92	3,87	3,84	3,81	3,77	3,75	3,72	3,71	3,69	3,68	3,67	3,67	3,67	3,67	3,67
12	13,74	10,92	9,78	9,15	8,75	8,47	8,26	8,10	7,98	7,87	7,79	7,72	7,60	7,52	7,39	7,31	7,23	7,14	7,09	7,02	6,99	6,94	6,90	6,88	6,88	6,88	6,88	6,88
13	5,59	4,74	4,35	4,12	3,97	3,87	3,79	3,73	3,68	3,63	3,60	3,57	3,52	3,49	3,44	3,41	3,38	3,34	3,32	3,29	3,28	3,25	3,24	3,23	3,23	3,23	3,23	3,23
14	12,25	9,55	8,45	7,86	7,46	7,19	7,00	6,84	6,71	6,62	6,54	6,47	6,35	6,27	6,15	6,07	5,98	5,90	5,85	5,78	5,75	5,70	5,67	5,65	5,65	5,65	5,65	5,65
15	5,32	4,46	4,07	3,84	3,69	3,58	3,50	3,44	3,39	3,34	3,31	3,28	3,23	3,20	3,15	3,12	3,08	3,05	3,03	3,00	2,98	2,96	2,94	2,93	2,93	2,93	2,93	2,93
16	11,26	8,65	7,59	7,01	6,63	6,37	6,19	6,03	5,91	5,82	5,74	5,67	5,56	5,48	5,36	5,28	5,20	5,11	5,06	5,00	4,96	4,91	4,88	4,86	4,86	4,86	4,86	4,86
17	5,12	4,26	3,86	3,63	3,48	3,37	3,29	3,23	3,18	3,13	3,10	3,07	3,02	2,98	2,93	2,90	2,86	2,82	2,80	2,77	2,76	2,73	2,72	2,71	2,71	2,71	2,71	2,71
18	10,56	8,02	6,99	6,42	6,06	5,80	5,62	5,47	5,35	5,26	5,18	5,11	5,00	4,92	4,80	4,73	4,64	4,56	4,51	4,45	4,41	4,36	4,33	4,31	4,31	4,31	4,31	4,31
19	4,96	4,80	3,71	3,48	3,33	3,22	3,14	3,07	3,02	2,97	2,94	2,91	2,86	2,82	2,77	2,74	2,70	2,67	2,64	2,61	2,59	2,56	2,55	2,54	2,54	2,54	2,54	2,54
20	10,04	7,56	6,55	5,99	5,64	5,39	5,21	5,06	4,95	4,85	4,78	4,71	4,60	4,52	4,41	4,33	4,25	4,17	4,12	4,05	4,01	3,96	3,93	3,91	3,91	3,91	3,91	3,91
21	4,84	3,98	3,59	3,36	3,20	3,09	3,01	2,95	2,90	2,86	2,82	2,79	2,74	2,70	2,65	2,61	2,57	2,53	2,50	2,47	2,45	2,42	2,41	2,40	2,40	2,40	2,40	2,40
22	9,65	7,20	6,22	5,67	5,32	5,07	4,88	4,74	4,63	4,54	4,46	4,40	4,29	4,21	4,10	4,02	3,94	3,86	3,80	3,74	3,70	3,66	3,62	3,50	3,50	3,50	3,50	3,50
23	4,75	3,88	3,49	3,26	3,11	3,00	2,92	2,85	2,80	2,76	2,72	2,69	2,64	2,60	2,54	2,50	2,46	2,42	2,40	2,36	2,35	2,32	2,31	2,30	2,30	2,30	2,30	2,30
24	9,38	6,93	5,95	5,41	5,06	4,82	4,65	4,50	4,39	4,30	4,22	4,16	4,05	3,98	3,86	3,78	3,70	3,61	3,56	3,49	3,46	3,41	3,38	3,36	3,36	3,36	3,36	3,36
25	4,67	3,80	3,41	3,18	3,02	2,92	2,84	2,77	2,72	2,67	2,63	2,60	2,55	2,51	2,46	2,42	2,38	2,34	2,32	2,28	2,26	2,24	2,22	2,21	2,21	2,21	2,21	2,21
26	9,07	6,70	5,74	5,20	4,86	4,62	4,44	4,30	4,19	4,10	4,02	3,96	3,85	3,78	3,67	3,60	3,51	3,42	3,37	3,30	3,27	3,21	3,18	3,16	3,16	3,16	3,16	3,16
27	4,60	3,74	3,34	3,11	2,96	2,85	2,77	2,70	2,65	2,60	2,56	2,53	2,48	2,44	2,39	2,35	2,31	2,27	2,24	2,21	2,19	2,16	2,14	2,13	2,13	2,13	2,13	2,13
28	8,86	6,51	5,56	5,03	4,89	4,46	4,28	4,14	4,03	3,94	3,86	3,80	3,70	3,62	3,51	3,43	3,34	3,26	3,21	3,14	3,11	3,06	3,02	3,00	3,00	3,00	3,00	3,00
29	4,54	3,68	3,29	3,06	2,90	2,79	2,70	2,64	2,59	2,55	2,51	2,48	2,43	2,39	2,33	2,29	2,25	2,21	2,18	2,15	2,12	2,10	2,06	2,07	2,07	2,07	2,07	2,07
30	8,68	6,36	5,42	4,89	4,56	4,32	4,14	4,00	3,89	3,80	3,73	3,67	3,56	3,48	3,36	3,29	3,20	3,12	3,07	3,00	2,97	2,92	2,89	2,87	2,87	2,87	2,87	2,87
31	4,49	3,63	3,24	3,01	2,85	2,74	2,66	2,59	2,54	2,49	2,45	2,42	2,37	2,33	2,28	2,24	2,20	2,16	2,13	2,09	2,07	2,04	2,02	2,01	2,01	2,01	2,01	2,01
32	8,53	6,23	5,29	4,77	4,44	4,20	4,03	3,89	3,78	3,69	3,61	3,55	3,45	3,37	3,25	3,18	3,10	3,01	2,96	2,89	2,86	2,80	2,77	2,75	2,75	2,75	2,75	2,75
33	4,45	3,59	3,20	2,96	2,81	2,70	2,62	2,55	2,50	2,45	2,41	2,38	2,33	2,29	2,23	2,19	2,15	2,11	2,08	2,04	2,02	1,99	1,97	1,96	1,96	1,96	1,96	1,96
34	8,40	6,11	5,18	4,67	4,34	4,10	3,93	3,79	3,68	3,59	3,52	3,45	3,35	3,27	3,16	3,08	3,00	2,92	2,86	2,79	2,76	2,70	2,67	2,65	2,65	2,65	2,65	2,65
35	4,41	3,55	3,16	2,93	2,77	2,66	2,58	2,51	2,46	2,41	2,37	2,34	2,29	2,25	2,19	2,15	2,11	2,07	2,04	2,00	1,98	1,96	1,93	1,92	1,92	1,92	1,92	1,92
36	8,28	6,01	5,09	4,58	4,25	4,01	3,85	3,71	3,60	3,51	3,44	3,37	3,27	3,19	3,07	3,00	2,91	2,88	2,78	2,71	2,68	2,62	2,59	2,57	2,57	2,57	2,57	2,57
37	4,38	3,52	3,13	2,90	2,74	2,63	2,55	2,48	2,43	2,38	2,34	2,31	2,26	2,21	2,15	2,11	2,07	2,02	2,00	1,96	1,94	1,91	1,90	1,88	1,88	1,88	1,88	1,88
38	8,18	5,93	5,01	4,50	4,17	3,94	3,77	3,63	3,52	3,43	3,36	3,30	3,19	3,12	3,00	2,92	2,84	2,76	2,70	2,63	2,56	2,54	2,51	2,49	2,49	2,49	2,49	2,49
39	4,35	3,49	3,10	2,87	2,71	2,60	2,52	2,45	2,40	2,35	2,31	2,26	2,23	2,18	2,12	2,08	2,04	1,99	1,96	1,92	1,90	1,87	1,85	1,84	1,84	1,84	1,84	1,84
40																												

26	4,22	3,37	2,89	2,74	2,59	2,47	2,39	2,32	2,27	2,22	2,18	2,15	2,10	2,05	1,99	1,95	1,90	1,85	1,82	1,78	1,76	1,72	1,70	1,69
	7,72	5,53	4,64	4,14	3,82	3,59	3,42	3,29	3,17	3,09	3,02	2,96	2,86	2,77	2,66	2,58	2,50	2,41	2,36	2,28	2,25	2,19	2,15	2,13
27	4,21	3,35	2,96	2,73	2,57	2,46	2,37	2,30	2,25	2,20	2,16	2,13	2,08	2,03	1,97	1,93	1,88	1,84	1,80	1,76	1,74	1,71	1,68	1,67
	7,68	5,49	4,60	4,11	3,79	3,56	3,39	3,26	3,14	3,06	2,98	2,93	2,83	2,74	2,63	2,55	2,47	2,38	2,33	2,25	2,21	2,16	2,12	2,10
28	4,20	3,34	2,95	2,71	2,56	2,44	2,36	2,29	2,24	2,19	2,15	2,12	2,06	2,02	1,96	1,91	1,87	1,81	1,78	1,75	1,72	1,69	1,67	1,65
	7,64	5,45	4,57	4,07	3,76	3,53	3,36	3,23	3,11	3,03	2,95	2,90	2,80	2,71	2,60	2,52	2,44	2,35	2,30	2,22	2,18	2,13	2,09	2,06
29	4,18	3,33	2,93	2,70	2,54	2,43	2,35	2,28	2,22	2,18	2,14	2,10	2,05	2,00	1,94	1,90	1,85	1,80	1,77	1,73	1,71	1,68	1,65	1,64
	7,60	5,52	4,54	4,04	3,73	3,50	3,33	3,20	3,08	3,00	2,92	2,87	2,77	2,68	2,57	2,49	2,41	2,32	2,27	2,19	2,15	2,10	2,06	2,03
30	4,17	3,32	2,92	2,69	2,53	2,42	2,34	2,27	2,21	2,16	2,12	2,09	2,04	1,99	1,93	1,89	1,84	1,79	1,76	1,72	1,69	1,66	1,64	1,62
	7,56	5,39	4,51	4,02	3,70	3,47	3,30	3,17	3,06	2,98	2,90	2,84	2,74	2,66	2,55	2,47	2,38	2,29	2,24	2,16	2,13	2,07	2,03	2,01
32	4,15	3,30	2,90	2,67	2,51	2,40	2,32	2,25	2,19	2,14	2,10	2,07	2,02	1,97	1,91	1,86	1,82	1,76	1,74	1,69	1,67	1,64	1,61	1,59
	7,50	5,34	4,46	3,97	3,66	3,42	3,25	3,12	3,01	2,94	2,86	2,80	2,70	2,62	2,51	2,42	2,34	2,25	2,20	2,12	2,08	2,02	1,98	1,96
34	4,13	3,28	2,88	2,65	2,49	2,38	2,30	2,23	2,17	2,12	2,08	2,05	2,00	1,95	1,89	1,84	1,80	1,74	1,71	1,67	1,64	1,61	1,59	1,57
	7,44	5,29	4,42	3,93	3,61	3,38	3,21	3,08	2,97	2,89	2,82	2,76	2,66	2,58	2,47	2,38	2,30	2,21	2,15	2,08	2,04	1,98	1,94	1,91
36	4,11	3,26	2,86	2,63	2,48	2,36	2,28	2,21	2,15	2,10	2,06	2,03	1,89	1,93	1,87	1,82	1,78	1,72	1,69	1,65	1,62	1,59	1,56	1,55
	7,39	5,25	4,38	3,89	3,58	3,35	3,18	3,04	2,94	2,86	2,78	2,72	2,62	2,54	2,43	2,35	2,26	2,17	2,12	2,04	2,00	1,94	1,90	1,87
38	4,10	3,25	2,85	2,62	2,46	2,35	2,26	2,19	2,14	2,09	2,05	2,02	1,96	1,92	1,85	1,80	1,76	1,71	1,67	1,63	1,60	1,57	1,54	1,53
	7,35	5,21	4,34	3,86	3,54	3,32	3,15	3,02	2,91	2,82	2,75	2,69	2,59	2,51	2,40	2,32	2,22	2,14	2,08	2,00	1,97	1,90	1,86	1,84
40	4,08	3,23	2,84	2,61	2,45	2,34	2,25	2,18	2,12	2,07	2,04	2,00	1,95	1,90	1,84	1,79	1,74	1,69	1,66	1,61	1,59	1,55	1,53	1,51
	7,31	5,18	4,31	3,83	3,51	3,29	3,12	2,99	2,88	2,80	2,73	2,66	2,56	2,49	2,37	2,29	2,20	2,11	2,05	1,97	1,94	1,88	1,84	1,81
42	4,07	3,22	2,83	2,59	2,44	2,32	2,24	2,17	2,11	2,06	2,02	1,99	1,94	1,89	1,82	1,78	1,73	1,68	1,64	1,60	1,57	1,54	1,51	1,49
	7,27	5,15	4,29	3,80	3,49	3,26	3,10	2,96	2,86	2,77	2,70	2,64	2,54	2,46	2,35	2,26	2,17	2,08	2,02	1,94	1,91	1,85	1,80	1,78
44	4,06	3,21	2,82	2,58	2,43	2,31	2,23	2,16	2,10	2,05	2,01	1,98	1,92	1,88	1,81	1,76	1,71	1,66	1,63	1,58	1,56	1,52	1,50	1,48
	7,24	5,12	4,26	3,78	3,46	3,24	3,07	2,94	2,84	2,75	2,68	2,62	2,52	2,44	2,32	2,24	2,12	2,06	2,00	1,92	1,88	1,82	1,78	1,75
46	4,05	3,20	2,81	2,57	2,42	2,30	2,22	2,14	2,09	2,04	2,00	1,97	1,91	1,87	1,80	1,75	1,71	1,65	1,62	1,57	1,54	1,51	1,48	1,46
	7,21	5,10	4,24	3,76	3,44	3,22	3,05	2,92	2,82	2,73	2,66	2,60	2,50	2,42	2,32	2,22	2,11	2,04	1,98	1,90	1,86	1,80	1,76	1,72
48	4,04	3,19	2,80	2,56	2,41	2,30	2,21	2,14	2,08	2,03	1,99	1,96	1,90	1,86	1,79	1,74	1,70	1,64	1,61	1,56	1,53	1,50	1,47	1,45
	7,19	5,08	4,22	3,74	3,42	3,20	3,04	2,90	2,80	2,71	2,64	2,58	2,48	2,40	2,28	2,20	2,10	2,02	1,96	1,88	1,84	1,78	1,73	1,70
50	4,03	3,18	2,79	2,56	2,40	2,29	2,20	2,13	2,07	2,02	1,98	1,95	1,90	1,85	1,78	1,74	1,69	1,63	1,60	1,55	1,52	1,48	1,46	1,44
	7,17	5,06	4,20	3,72	3,44	3,18	3,02	2,88	2,78	2,70	2,62	2,56	2,46	2,39	2,26	2,18	2,10	2,00	1,94	1,86	1,82	1,76	1,71	1,68
55	4,02	3,17	2,78	2,54	2,38	2,27	2,18	2,11	2,05	2,00	1,97	1,93	1,88	1,83	1,76	1,72	1,67	1,61	1,58	1,52	1,50	1,46	1,43	1,41
	7,12	5,01	4,16	3,65	3,37	3,15	2,98	2,85	2,75	2,66	2,59	2,53	2,43	2,35	2,23	2,15	2,00	1,96	1,90	1,82	1,78	1,71	1,66	1,64
60	4,00	3,15	2,76	2,52	2,37	2,25	2,17	2,10	2,04	1,99	1,95	1,92	1,86	1,81	1,75	1,70	1,65	1,59	1,56	1,50	1,48	1,44	1,41	1,39
	7,08	4,98	4,13	3,65	3,34	3,12	2,95	2,82	2,72	2,63	2,56	2,50	2,40	2,32	2,20	2,12	2,03	1,93	1,87	1,79	1,74	1,68	1,63	1,60
65	3,99	3,14	2,75	2,51	2,36	2,21	2,15	2,08	2,02	1,98	1,94	1,90	1,85	1,80	1,73	1,68	1,63	1,57	1,54	1,49	1,46	1,42	1,39	1,37
	7,01	4,95	4,10	3,62	3,31	3,09	2,93	2,79	2,70	2,61	2,54	2,47	2,37	2,30	2,18	2,09	2,00	1,90	1,84	1,76	1,71	1,64	1,60	1,56
70	3,98	3,13	2,74	2,50	2,35	2,22	2,14	2,07	2,01	1,97	1,93	1,89	1,84	1,79	1,72	1,67	1,62	1,56	1,53	1,47	1,45	1,40	1,37	1,35
	7,01	4,92	4,08	3,60	3,29	3,07	2,91	2,77	2,67	2,59	2,51	2,45	2,35	2,28	2,15	2,07	1,98	1,88	1,82	1,74	1,69	1,63	1,56	1,53
80	3,96	3,11	2,72	2,48	2,33	2,21	2,12	2,05	1,99	1,95	1,91	1,88	1,82	1,77	1,70	1,65	1,60	1,54	1,51	1,45	1,42	1,38	1,35	1,32
	6,96	4,88	4,01	3,58	3,25	3,04	2,87	2,74	2,64	2,55	2,48	2,44	2,32	2,24	2,11	2,03	1,94	1,84	1,78	1,70	1,65	1,57	1,52	1,49
100	3,94	3,09	2,70	2,46	2,30	2,19	2,10	2,03	1,97	1,92	1,88	1,85	1,79	1,75	1,68	1,63	1,57	1,51	1,48	1,42	1,39	1,34	1,30	1,28
	6,90	4,82	3,98	3,51	3,20	2,99	2,82	2,69	2,59	2,51	2,43	2,36	2,26	2,19	2,06	1,98	1,89	1,79	1,73	1,64	1,59	1,51	1,46	1,43
125	3,92	3,07	2,68	2,44	2,29	2,17	2,08	2,01	1,95	1,90	1,86	1,83	1,77	1,72	1,65	1,60	1,55	1,49	1,45	1,39	1,36	1,31	1,27	1,25
	6,84	4,78	3,94	3,47	3,17	2,95	2,79	2,65	2,56	2,47	2,40	2,33	2,23	2,15	2,03	1,94	1,85	1,75	1,68	1,59	1,54	1,46	1,40	1,37
150	3,91	3,06	2,67	2,43	2,27	2,16	2,07	2,00	1,94	1,89	1,85	1,82	1,76	1,71	1,64	1,59	1,54	1,47	1,44	1,37	1,34	1,29	1,25	1,22
	6,81	4,75	3,91	3,44	3,13	2,92	2,76	2,62	2,53	2,44	2,37	2,30	2,20	2,12	2,00	1,91	1,82	1,72	1,66	1,56	1,51	1,43	1,37	1,33
200	3,89	3,01	2,65	2,41	2,26	2,14	2,05	1,98	1,92	1,87	1,83	1,80	1,74	1,69	1,62	1,57	1,52	1,45	1,42	1,35	1,32	1,26	1,22	1,19
	6,76	4,71	3,88	3,41	3,11	2,90	2,73	2,60	2,50	2,41	2,34	2,28	2,17	2,09	1,97	1,88	1,79	1,69	1,62	1,53	1,48	1,39	1,33	1,28
400	3,86	3,02	2,62	2,39	2,23	2,12	2,03	1,96	1,90	1,85	1,81	1,78	1,72	1,67	1,60	1,54	1,49	1,42	1,38	1,32	1,28	1,22	1,16	1,13
	6,70	4,66	3,83	3,36	3,06	2,85	2,69	2,55	2,46	2,37	2,29	2,23	2,12	2,04	1,92	1,84	1,74	1,64	1,57	1,47	1,42	1,32	1,24	1,19
1000	3,85	3,00	2,61	2,38	2,22	2,10	2,02	1,95	1,89	1,81	1,80	1,76	1,70	1,65	1,58	1,53	1,47	1,41	1,36	1,30	1,26	1,19	1,13	1,08
	6,68	4,62	3,80	3,34	3,04	2,82	2,66	2,53	2,43	2,34	2,26	2,20	2,09	2,01	1,89	1,81	1,71	1,61	1,54	1,44	1,38	1,28	1,19	1,13
∞	3,84	2,99	2,60	2,37	2,21	2,09	2,01	1,94	1,88	1,83	1,79	1,75	1,69	1,64	1,57	1,52	1,46	1,40	1,35	1,28	1,24	1,17	1,11	1,00
	6,64	4,60	3,78	3,32	3,02	2,80	2,64	2,51	2,41	2,32	2,24	2,18	2,07	1,99	1,87	1,79	1,69	1,59	1,52	1,41	1,36	1,25	1,12	1,00

Source: Sudjana. *Metoda Statistika*. Bandung: Tarsito, 2002

APPENDIX XIII**PERCENTAGE POINTS OF DISTRIBUTION**

DF	A	0.80	0.90	0.95	0.98	0.99	0.995	0.998	0.999
	P	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001
1		3.078	6.314	12.706	31.820	63.657	127.321	318.309	636.619
2		1.886	2.920	4.303	6.965	9.925	14.089	22.327	31.599
3		1.638	2.353	3.182	4.541	5.841	7.453	10.215	12.924
4		1.533	2.132	2.776	3.747	4.604	5.598	7.173	8.610
5		1.476	2.015	2.571	3.365	4.032	4.773	5.893	6.869
6		1.440	1.943	2.447	3.143	3.707	4.317	5.208	5.959
7		1.415	1.895	2.365	2.998	3.499	4.029	4.785	5.408
8		1.397	1.860	2.306	2.897	3.355	3.833	4.501	5.041
9		1.383	1.833	2.262	2.821	3.250	3.690	4.297	4.781
10		1.372	1.812	2.228	2.764	3.169	3.581	4.144	4.587
11		1.363	1.796	2.201	2.718	3.106	3.497	4.025	4.437
12		1.356	1.782	2.179	2.681	3.055	3.428	3.930	4.318
13		1.350	1.771	2.160	2.650	3.012	3.372	3.852	4.221
14		1.345	1.761	2.145	2.625	2.977	3.326	3.787	4.140
15		1.341	1.753	2.131	2.602	2.947	3.286	3.733	4.073
16		1.337	1.746	2.120	2.584	2.921	3.252	3.686	4.015
17		1.333	1.740	2.110	2.567	2.898	3.222	3.646	3.965
18		1.330	1.734	2.101	2.552	2.878	3.197	3.610	3.922
19		1.328	1.729	2.093	2.539	2.861	3.174	3.579	3.883
20		1.325	1.725	2.086	2.528	2.845	3.153	3.552	3.850
21		1.323	1.721	2.080	2.518	2.831	3.135	3.527	3.819
22		1.321	1.717	2.074	2.508	2.819	3.119	3.505	3.792
23		1.319	1.714	2.069	2.500	2.807	3.104	3.485	3.768
24		1.318	1.711	2.064	2.492	2.797	3.090	3.467	3.745

25			1.316	1.708	2.060	2.485	2.787	3.078	3.450	3.725
26			1.315	1.706	2.056	2.479	2.779	3.067	3.435	3.707
27			1.314	1.703	2.052	2.473	2.771	3.057	3.421	3.690
28			1.313	1.701	2.048	2.467	2.763	3.047	3.408	3.674
29			1.311	1.699	2.045	2.462	2.756	3.038	3.396	3.659
30			1.310	1.697	2.042	2.457	2.750	3.030	3.385	3.646
31			1.309	1.695	2.040	2.453	2.744	3.022	3.375	3.633
32			1.309	1.694	2.037	2.449	2.738	3.015	3.365	3.622
33			1.308	1.692	2.035	2.445	2.733	3.008	3.356	3.611
34			1.307	1.691	2.032	2.441	2.728	3.002	3.348	3.601
35			1.306	1.690	2.030	2.438	2.724	2.996	3.340	3.591
36			1.306	1.688	2.028	2.434	2.719	2.991	3.333	3.582
37			1.305	1.687	2.026	2.431	2.715	2.985	3.326	3.574
38			1.304	1.686	2.024	2.429	2.712	2.980	3.319	3.566
39			1.304	1.685	2.023	2.426	2.708	2.976	3.313	3.558
40			1.303	1.684	2.021	2.423	2.704	2.971	3.307	3.551
42			1.302	1.682	2.018	2.418	2.698	2.963	3.296	3.538
44			1.301	1.680	2.015	2.414	2.692	2.956	3.286	3.526
46			1.300	1.679	2.013	2.410	2.687	2.949	3.277	3.515
48			1.299	1.677	2.011	2.407	2.682	2.943	3.269	3.505
50			1.299	1.676	2.009	2.403	2.678	2.937	3.261	3.496
60			1.296	1.671	2.000	2.390	2.660	2.915	3.232	3.460
70			1.294	1.667	1.994	2.381	2.648	2.899	3.211	3.435
80			1.292	1.664	1.990	2.374	2.639	2.887	3.195	3.416
90			1.291	1.662	1.987	2.369	2.632	2.878	3.183	3.402
100			1.290	1.660	1.984	2.364	2.626	2.871	3.174	3.391
120			1.289	1.658	1.980	2.358	2.617	2.860	3.160	3.373
150			1.287	1.655	1.976	2.351	2.609	2.849	3.145	3.357

200			1.286	1.652	1.972	2.345	2.601	2.839	3.131	3.340
300			1.284	1.650	1.968	2.339	2.592	2.828	3.118	3.323
500			1.283	1.648	1.965	2.334	2.586	2.820	3.107	3.310
∞			1.282	1.645	1.960	2.326	2.576	2.807	3.090	3.291

APPENDIX XIV**DOCUMENTATION**

Pic 1. The researcher give pre test paper to the students of experimental group



Pic 2. The researcher give the treatment to the students of experimental group



Pic 3. Students of experimental group doing the post test



Pic 4. The researcher giving pre test to the students of control group



Pic 5. The researcher collecting the post test